

Request for Proposals

January 16, 2018

Organic Materials Processing Services

Sonoma County Waste Management SCWMA

2300 County Center Drive, Suite B-100
Santa Rosa, CA 95403

Attn: Patrick Carter, Executive Director



10 Fourth Street
Petaluma, CA 94952

www.renewablesonoma.com

In Association With:

SCS ENGINEERS

SCS ENERGY

reBio

BIOFERM™
ENERGY SYSTEMS





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1. COVER LETTER, PROPOSAL BOND, PERFORMANCE BOND COMMITMENT LETTER, TABLE OF CONTENTS, RECEIPT OF ADDENDA, EXECUTIVE SUMMARY

January 12, 2018

Mr. Patrick Carter, Executive Director
Sonoma County Waste Management SCWMA
2300 County Center Drive, Suite B-100
Santa Rosa, CA 95403

Proposal to Provide Organic Materials Processing Services

Dear Mr. Carter:

Since late-2015, green waste resources generated in Sonoma County (County) are being hauled out-of-County. An independent report published in June 2017 estimates this adds 4,000 truck trips per year and is exacerbating the major cause of greenhouse gas (GHG) emissions in the County, which is transportation.

In addition, hauling of green waste to locations outside the County has made life more difficult for farmers, landscapers, vintners, and others because they have had to pay more for compost and mulch. The cost of waste collection services has risen substantially, development of healthy soils and carbon farming has been hampered, and remediation of entire areas of soil devastated by recent catastrophic fires is slowed by the lack of plentiful, high-quality, locally produced compost.

As a consequence of the unfortunate closure of Sonoma Compost Company, LLC (Sonoma Compost) in late-2015:

- Sonoma County lost its only local source for high-quality compost derived from green waste resources generated in the County.
- Sonoma County's GHG footprint has increased considerably.

Proposing Entity

Renewable Sonoma, LLC (Renewable Sonoma) is the proposing entity and will sign the Agreement. Renewable Sonoma is 100% owned by Sonoma Compost. Two other firms, reBio LLC (reBIO) and BIOFerm™ Energy, LLC (BIOFerm) are associate companies of Renewable Sonoma. Subcontractor, Stearns, Conrad and Schmidt, Consulting Engineers,



Inc. dba SCS Engineers (SCS) and SCS Energy, will be the Engineering, Procurement, and Construction (EPC) prime contractor.

Solution

Renewable Sonoma proposes to design and build a covered aerated static pile (CASP) composting system and an anaerobic digestion (AD) system on land near the Laguna Treatment Plant (LTP). The City of Santa Rosa recently issued a Letter of Intent to approve location of our solution at this site. When integrated with the LTP, our solution will produce high-quality compost, mulches, and biogas from organic materials generated within the County. In addition to meeting the needs of the residential, business, and agricultural communities for a centrally located state-of-the-art organics processing facility, our solution also delivers an exceptional series of benefits to LTP management. These benefits and their values are described in Section 4. Technical Proposal.

Renewable Sonoma will:

- Apply the highest standards of quality to our solution's design, construction, and integration with existing LTP infrastructure and operations.
- Proactively unearth, understand, and satisfy community concerns.
- Communicate regularly, professionally, and collaboratively with all SCWMA and LTP management; regulators; community groups; and other stakeholders.
- Work cohesively and diligently to ensure project outcomes align with projections.

Required Statements

Renewable Sonoma has examined, understands, and agrees to the Draft Agreement (while making several suggestions to improve it); has reviewed the RFP, the seven attachments listed on Page 11 of the RFP, and RFP addenda 1 2, 3, and 4, dated July 7, July 27, Sept 3, and Nov 21, 2017, respectively; has conducted all due diligence necessary to confirm the material facts upon which our proposal is based; has completed all required Forms; confirms the validity of our proposal, including tipping fees and pricing, for a period of 260 days; and confirms we will enter into the Agreement if selected.

A \$25,000 proposal bond and \$1 million performance bond commitment letter are provided on the following pages. I am authorized to commit Renewable Sonoma to the services described in this proposal. If you have any questions, please do not hesitate to let me know.

Sincerely,



Will Bakx, Principal

Renewable Sonoma, LLC

10 Fourth St. Petaluma, CA 94952

707-240-4222 ext. 5

707-479-8098 mobile

will@renewablesonoma.com

PROPOSAL BOND

In accordance with Page 26 of the RFP, a **\$25,000** proposal bond is provided on the following page.

Renewable Sonoma is a limited liability company formed in California on August 7, 2017 specifically for this project. Renewable Sonoma is 100% owned by Sonoma Compost, LLC. If our proposal is selected, all project work under the associated Agreement will be completed under the auspices and authority of Renewable Sonoma.

Associate companies of Renewable Sonoma, reBIO, LLC (reBIO) and BIOFerm Energy, LLC (BIOFerm) will provide essential project development, financing, equipment, and other support services.

Subcontractor, SCS Engineers (SCS), will fulfil the role of Engineering, Procurement, and Construction (EPC) prime contractor. SCS will complete a flow-down agreement with Renewable Sonoma that mirrors the terms and conditions of the agreement between SCWMA and Renewable Sonoma.

PERFORMANCE BOND COMMITMENT LETTER

A commitment letter from International Fidelity Insurance Company Surety Group (IFIC Group) to issue a Performance Bond in the sum of **\$1,000,000** is provided on the following page.

IFIC Group is licensed to do business in California, has a rating of or equivalent to A: VII by A.M. Best & Company, and is included on the list of surety companies approved by the Treasurer of the United States.

Within 10 days of notification of award, Renewable Sonoma will submit to SCWMA a Performance Bond in the sum of **\$1,000,000**.

ACKNOWLEDGMENT OF ADDENDA

Renewable Sonoma acknowledges receipt of addenda 1, 2, 3, and 4, dated July 7, July 27, Sept 3, and Nov 21, 2017, respectively.

Signed acknowledgment of receipt for each addendum is provided in **Appendix A**.

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<u>K: ECS Information on Composting Facility Design and Odor Control</u>	
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Cover Images: CASP composting system (courtesy of ECS); COCCUS® anaerobic digesters (courtesy of BIOFerm); Alan Siegle (left) and Will Bakx (right) receiving a Sustainable North Bay Award from then Assemblyman, now Congressman, Jared Huffman (courtesy of Sonoma Compost Co.)

EXECUTIVE SUMMARY

Key Objectives and Desired Outcomes

SCWMA desires not just a well-managed organic materials processing facility that meets the needs of the entire Sonoma County community, but a solution that also helps reduce GHG emissions and helps meet state-mandated waste diversion goals. *The Renewable Sonoma composting and anaerobic digestion system does all this and more.*

Key Elements of Our Solution

Restoration of Sonoma Compost to a Position of Prominence

Our solution is the only solution that restores Sonoma Compost to a preeminent role in the education, advancement, and operation of composting services in Sonoma County. Sonoma Compost operated the County's primary compost and mulch production and sales business at the Sonoma Central Disposal Site from 1993 to 2015. Compost quality was exceptional and remains unmatched to this day. **Co-owners, Will Bakx and Alan Siegle, residents of Sonoma County since 1979 and 1974, respectively, have devoted the past 24 years of their lives to developing the composting and [carbon farming](#) industries in Sonoma County (and California, in general).** Will and Alan are exceptionally well-qualified to bring state-of-the-art, environmentally friendly organics processing back to the County. *Overwhelmingly enthusiastic support for the return of Sonoma Compost, including from leading agricultural and environmental organizations, is evidenced by the numerous letters of support provided in **Appendix B**.*

Exceptional Synergistic Use Opportunities

In meetings with Mr. Mike Prinz, Deputy Director of Subregional Operations for Santa Rosa Water between late-2016 and early-2017, our Team identified many mutually beneficial synergistic use opportunities associated with locating our solution on land near the LTP – some of which will deliver truly exceptional value to the LTP. These benefits and their values are described in Section 4. Technical Proposal. The City of Santa Rosa recently issued Renewable Sonoma with a Letter of Intent to lease land near the LTP to Renewable Sonoma where we plan to construct and operate our solution (see **Appendix C**).

Our CASP composting system and anaerobic digestion system solution will:

- **Meet or exceed Bay Area Air Quality Management District (BAAQMD) Best Available Control Technology (BACT) standards for emissions and odor.**
- **Be a Zero Discharge facility that meets North Coast Regional Water Quality Control Board (NCRWQCB) standards.**

Our solution will:

- Process approximately 121,000 tons per year of organic materials, and be capable of processing all organic materials SCWMA and other providers can deliver, including all organic materials currently being sent out of county for

composting, plus 75% of residential and commercial food scraps that SCWMA estimates are currently being landfilled. These food scraps must be diverted from landfills if SCWMA and its members are to meet state mandates and local goals for diversion.

- Produce enough biogas to operate approximately 960 kilowatts (kw) of installed generating capacity that is presently unused.
- Reduce GHG emissions by nearly 24,000 MT CO₂e/year (the equivalent of removing 5,000 cars from the road).
- Add energy storage to increase the benefits of the pioneering Microgrid project under development at the LTP.
- Produce approximately 100,000 cubic yards per year of high-quality compost and mulch products for sale.
- Provide extra daily composting capacity for sewage sludge, as needed by the LTP.
- Be designed and built with the utmost concern for safe and reliable operations that meet or exceed regulations for minimizing odor, noise, and air emissions.
- Include a comprehensive Community Engagement Program to significantly increase the rate of organics diversion (and reduce contamination), so SCWMA and its member agencies can meet state mandates and their own local goals.
- Employ local resources in the Community Engagement Program, such as the Youth Conservation Core; sponsor a Countywide Food Recovery Program; and collaborate with LTP management to provide community education to reduce the stigma attached to sewage sludge compost.
- Provide all this to SCWMA for an organics baseline tipping fee of \$ *redacted*

*NOTE: If we are awarded the project, we will work diligently with all stakeholders to explore all viable options for reducing the tipping fee. However, without further discussion, we feel it would be inappropriate to commit to anything lower than \$ *redacted*. For example, if we can successfully negotiate locating our solution where existing LTP composting operations exist, CTS mitigation costs can be significantly reduced, allowing the tipping fee to be reduced.*

Local

We are a predominately local team led by individuals well-known in the community, who have dedicated themselves to composting in Sonoma County for decades and to development of this project for many years. *This clearly distinguishes Renewable Sonoma from a large corporate entity for which Sonoma County may be a pin in their U.S. or global map, or which may be branching out from their primary line of business.*

Fair Labor, Fair Profit, Full Cycle Sustainability

All labor will be compensated at prevailing wage rates and all labor laws will be carefully adhered to. We are also committed to careful and prudent fiscal control, in order to strike the right balance between a fair profit and competitive pricing to SCWMA for our services.

Zero Discharge, Negative Carbon Footprint

Our solution is a Zero Discharge facility for water, has a negative carbon footprint and includes a Zero Waste Plan to minimize waste during construction and operations.

Low-Risk, Trouble-Free

Our Team is wholeheartedly committed to achieving all project objectives and meeting all project expectations as quickly as possible. We have the breadth and depth of technical know-how and managerial experience to do this, and our investors and lenders are poised to support our capital needs at the appropriate time.

Schedule

Our solution is expected to be operational in **3rd Quarter 2021**. Assumptions and details related to this schedule are provided in Section 4. Technical Proposal.

Key Strengths of Renewable Sonoma

Proposing Entity

Renewable Sonoma is the proposing entity. **Renewable Sonoma is 100% owned by Sonoma Compost. Sonoma Compost successfully ([see video](#)) operated the largest composting business in Sonoma County from 1993 to 2015. Will Bakx, co-founder of Sonoma Compost is our project principal and the primary point of contact for SCWMA staff.**

Two associate companies will work with Sonoma Compost to develop and deliver our Team's solution:

- **reBio**, a California limited liability company based in Petaluma, CA. reBio is a start-up energy project development company. Principals, Roy Alper, James Tsui, and Brian Eberly have over 50 years of combined experience developing waste-fueled energy projects ranging in size from \$25 million to \$200 million. **Roy Alper is our Team's Lead Developer and the secondary point of contact for SCWMA staff.** Brian has lived in Sonoma County since 2004. *His home was completely destroyed by the 2017 Tubbs Fire.*
- **BIOFerm**, a limited liability corporation based in Madison, Wisconsin. BIOFerm will deliver anaerobic digestion and gas-upgrading technology on a design-build-operate basis. BIOFerm will draw on experience from over 500 global anaerobic digestion installations, including four in the U.S., and 90 gas processing plant projects. Vice President for Technology and Development, Christine McKiernan, will lead BIOFerm's services on the Project. **Christine has over 30 years of experience in the design-build-operation of anaerobic digestion systems.**

Engineering, Procurement, and Construction (EPC) Contractor

SCS Engineers (SCS) will fulfill the role of EPC contractor, in a subcontractor capacity.

- **SCS has completed 27 projects directly for the County and is one of the County's most trusted engineering consultants.** Over the past 30 years, SCS has completed 450 projects in Sonoma County, including over 150 in Santa Rosa.
- **Four of SCS's key staff for this Project (50%) are based in SCS's thriving Santa Rosa office — only 12.5 miles from the LTP.**
- **SCS Zero Waste Director, Leslie Lukacs, (based in Santa Rosa) oversaw the SCWMA 2014 waste characterization study and is deeply involved with material management in Sonoma County.** She represents the Town of Windsor on the Local Task Force and is co-founder and co-chair of the Compost Coalition of Sonoma County. **Leslie is one of our project leaders and will be a point of contact for SCWMA.**
- Managing Director of SCS's Southwest Region, Pat Sullivan, will lead permitting efforts on the project. **Pat is a National Expert on air quality with extensive experience permitting composting and other waste management projects in California. Pat and permitting team, which includes Matthew Cotton, owner of Integrated Management Consulting, will encourage all agencies with jurisdiction over the project's permitting process to work together for maximum efficiency and flexibility, as mandated by AB 1045.**
- McGraw Hill's *Engineering News Record* (the engineering industry's pre-eminent national rankings publication) has ranked SCS the **No. 1 or No. 2 solid waste design firm in the U.S. the past 12 years in succession** (June 2017).

Our Team is unified in vision and highly confident in our combined talents, relationships, and resources. We have developed waste-fueled energy projects ranging from \$25 million to \$200 million, have unmatched hands-on experience operating a successful organics processing business in the County (1993 to 2015), unrivaled local knowledge and relationships, exceptional knowledge of the contractual and political complexities of developing an organics processing facility in Sonoma County, and exceptionally strong support from a broad spectrum of communities throughout Sonoma County.

In addition, significant intangible value will accrue to SCWMA and the LTP in welcoming back the widely respected and valued local firm, Sonoma Compost, who helped build the composting community in Sonoma County. Integrating our solution with the microgrid program at the LTP will also vault SCWMA to the forefront of the accelerating global movement to increase renewable energy to reduce GHG emissions on a local scale.

And perhaps most importantly, over the past five years, more than any other team our Team has shown sustained passion, creativity, and dedication to helping SCWMA develop a dynamic new organics processing facility in Sonoma County. **It is this passion to succeed and our dedication to collaboration that will likely be of greatest value to the SCWMA managers responsible for bringing the project to successful and timely fruition.**

2. QUALIFICATIONS

PROJECT TEAM

Proposing Entity

The proposing entity is Renewable Sonoma. Renewable Sonoma is 100% owned by Sonoma Compost. A copy of the Renewable Sonoma Operating Agreement is provided in **Appendix D**.

Sonoma Compost co-owners, Will Bakx and Alan Siegle, will oversee management of the entire project and will directly manage all composting operations and product marketing. Will Bakx is the Principal for our entire Team, and will be the primary point of contact for SCWMA staff.

Associate Companies

reBio

reBIO was formed in 2014 to provide renewable energy project development services, primarily in California, and specifically for this Project in Sonoma County. reBio is currently exclusively focused on developing and building the organic materials processing facility Sonoma County needs.

Roy Alper, Principal of reBIO, has 30 years of project development know-how in the alternative energy sector. He will be responsible for leading project development, contract negotiations, and financing, and will be the secondary point of contact for SCWMA staff.

BIOFerm

Established in 2007 and based in Madison, Wisconsin, BIOFerm provides turnkey anaerobic digestion and gas upgrading systems, and project development and consulting engineering services to North America's biogas market.

BIOFerm has exclusive North American rights to COCCUS® anaerobic digestion technology, of which nearly 500 are installed worldwide, including four in the U.S. BIOFerm also installs and operates Carbotech pressure swing adsorption (PSA) gas upgrading systems, of which 90 are in operation globally.

BIOFerm is the exclusive provider and North American licensee of Germany-based Viessmann Group's biogas and gas processing lines, BIOFerm became an independent U.S. company in 2017.

Engineering, Procurement, and Construction (EPC) Prime Contractor

SCS Engineers will be the EPC prime contractor (as a subcontractor to Renewable Sonoma).

Subcontractors

In addition to SCS, four specialty subcontractors will assist Renewable Sonoma on this project:

- **Engineered Compost Systems (ECS)**, Seattle, WA – CASP composting system design, equipment supply, and installation and operations support and training.
- **Wiemeyer Ecological Sciences**, Santa Rosa, CA – California Tiger Salamander (CTS) mitigation.
- **Craig Communications**, Oakland, CA – Community engagement.
- **Matthew Cotton, Integrated Waste Management Consulting, LLC**, Nevada City, CA – Permitting support.

A select number of vendors (drillers, electricians, suppliers, etc.) will also provide support services. **Whenever feasible, these vendors will be local firms.** Highly skilled and experienced principals and senior professionals representing each subcontractor/vendor will work on the project.

Strong Local Presence

Six of our team's 13 key staff live and work in Sonoma County.

As long-serving members of the Sonoma community, the majority of our leadership team understands first-hand the strength of community desire for the return of large-scale composting to Sonoma County and what the City's and SCWMA's related RFPs desire to accomplish.

We believe our local presence, coupled with our proven technologies, community and regulatory relationships, experience, know-how, and demonstrated commitment to supporting SCWMA with this high-visibility, high-value project are unparalleled.

The combined resources, experience, and intellectual capital of our Team (Sonoma Compost, reBIO, BIOFerm, and SCS) represent what we believe is an ideal Team for this project.

Members of our Team began preparing for this project as far back as 10 years ago. And despite members of our Team being directly devastated by the recent Tubbs Fire, we have worked together diligently and professionally to present the most meaningful proposal possible to SCWMA. Many of our Team members have participated in emergency support and community relief efforts following the Fire.

It is hard to explain just how much our local Team values the opportunity to lead this exciting, local, and "renewing" community initiative.

Contact Information

Primary Point of Contact:

Will Bakx

Renewable Sonoma
10 Fourth St.
Petaluma, CA 94952
707-240-4222 ext. 5 direct
707-479-8098 mobile
will@renewablesonoma.com

Principal of Renewable Sonoma and co-founder of Sonoma Compost, Will Bakx, will be responsible for Renewable Sonoma's overall performance and client service. In addition, he and his long-time business partner, Alan Siegle, will manage all activities related to composting operations and sales.

Secondary Point of Contact:

Roy Alper

reBIO
10 Fourth St.
Petaluma, CA 94952
707-240-4222 ext. 3 direct
510-882-4782 mobile
roy@renewablesonoma.com

As Lead Developer for our Team, principal of reBIO, Roy Alper, will be responsible for the timely and professional advancement of our solution from project initiation to completion, including financing and contract negotiations. In close partnership with Will, Roy will liaise with all Renewable Sonoma Team members to sequence and schedule activities. He will also serve as quality assurance manager for all client deliverables.

Additional Point of Contact – Community Engagement:

Leslie Lukacs

SCS Engineers
3843 Brickway Blvd., Suite 208
Santa Rosa, CA 95403
707-546-9461 direct
707-484-0441 mobile
llukacs@scsengineers.com

SCS's Director of Zero Waste, Leslie Lukacs, will manage the government affairs and community engagement aspect of our services, including communication with the County's waste collection services providers. She will direct the activities of specialty subcontractor,

Craig Communications, (community engagement specialists), and will also design and manage implementation of a Zero Waste Plan for our solution — *emphasizing: clean materials education; incoming materials sorting; and environmental compliance.*

Communication Plan

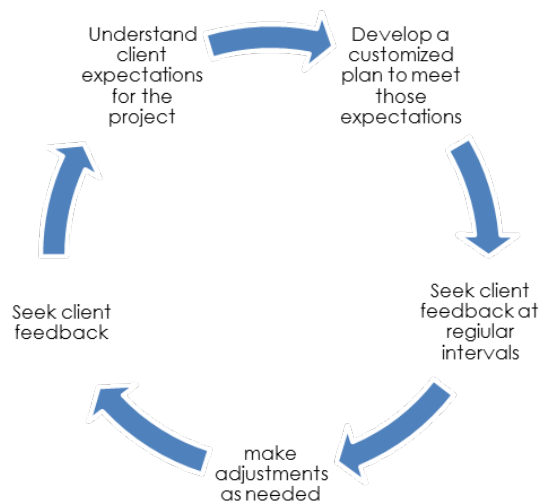
Will, Roy, and Leslie are fully committed to being available and accessible to receive phone calls, texts, and emails from SCWMA management and all other interested stakeholders, 24/7.

A detailed Communication Plan will be established in the kick-off meeting following Project award. Contact information for all parties will be shared, along with protocols for preferred days/times/methods of communication, and expectations for responsiveness to messages.

A well-designed Communication Plan is critical to effective project execution. Our team will follow a “closed loop” communication process (see diagram to right).

This process is proven to be highly effective in establishing and maintaining clear expectations and minimizing miscommunications throughout a project’s lifecycle.

Each member of our management team personally commits to following this process religiously.



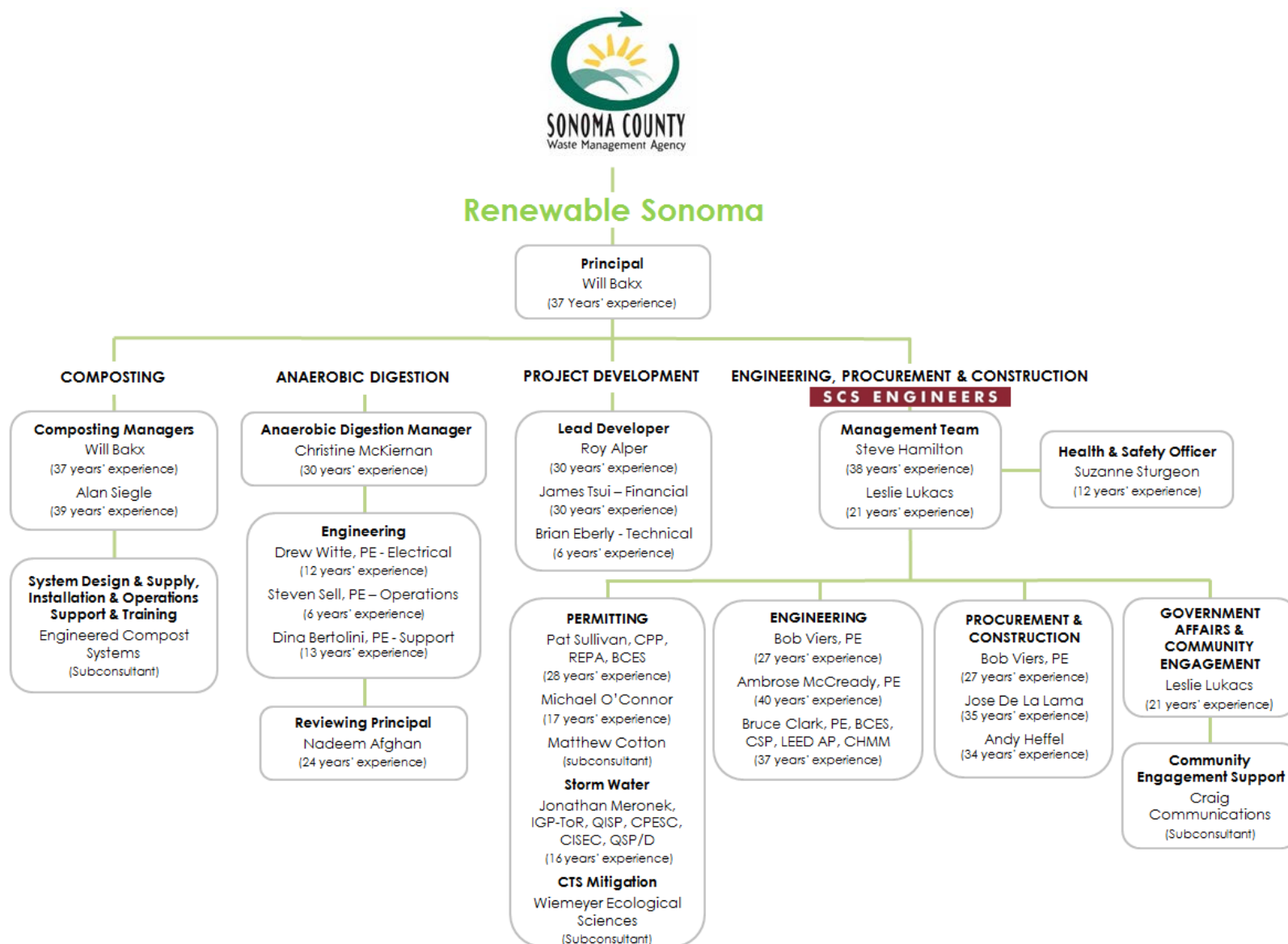
Conflict of Interest Statement

No gratuities have been or will be offered or given by any member of our team or any agent or representative of our team to any officer or employee of SCWMA or any participant in the selection process, in order to secure favorable treatment regarding the evaluation, scoring, and Agreement award process. All required Forms, including Form C – Certification of Non-Gratuities are provided in **Appendix S**.

ORGANIZATION CHART

An Organization Chart is provided below in Figure 1.

Figure 1. Organization Chart



The above professionals have some of the sharpest minds in the composting, anaerobic digestion, and waste reduction industries.

Many of our leaders and key staff are well-known to the SCWMA, City of Santa Rosa, and LTP staff connected with this project.

Key staff biographies and our Team's relevant expertise and experience are provided below in the following order:

Renewable Sonoma:

- **Sonoma Compost** – Organics processing systems, product sales, operations management.
- **reBio** – Project development, contract negotiations, financing.
- **BIOFerm** – Anaerobic digestion equipment and related support.

Subcontractors:



- **SCS Engineers, SCS Energy** – EPC Prime Contractor.
- **Engineered Compost Systems** – CASP composting system design and supply, installation operations training and support.
- **Wiemeyer Ecological Sciences** – CTS mitigation.
- **Craig Communications** – Community engagement.
- **Matthew Cotton, Integrated Waste Management Consulting** – Permitting support.



KEY STAFF BIOGRAPHIES



Biographies for our leadership team are provided below in Table 1. Biographies for the additional key staff noted in the above organization chart, including for the lead contact person for each subcontractor, are provided immediately below Table 1.


One- to four-page resumes for all team members (including education, licenses, professional affiliations, and descriptions of similar project experience) are provided in **Appendix E**.

Table 1. Leadership Team Information


Name	Role
 <p>Will Bakx Co-Founder Sonoma Compost 707-240-4222 ext. 5 direct 707-479-8098 mobile will@renewablesonoma.com 37 years of experience</p>	<p>Principal Primary Point of Contact</p> <p>Will is co-founder and owner of Sonoma Compost with Alan Siegle. He will be responsible for our Team's overall performance and client service. In addition, he and Alan will manage all services and activities related to composting operations and product marketing.</p> <p>Will is a pre-eminent soil scientist who has devoted his life to advancing the composting industry. He has 37 years of experience and expertise in all aspects of composting. Under an exclusive contract with SCWMA from 1993 to 2015, Alan and Will led Sonoma Compost's services to residents and businesses throughout Sonoma County. Known and valued by thousands of residents, business owners, farmers, and civic leaders throughout the County, Will is exceptionally well-qualified to bring advanced, environmentally friendly composting back to Sonoma County.</p> <p><i>Will has lived, studied, and worked in Sonoma County since 1979.</i></p>
 <p>Alan Siegle Co-Founder Sonoma Compost 707-664-9113 direct 707-849-7365 mobile alan@renewablesonoma.com 37 years of experience</p>	<p>Composting Co-Manager</p> <p>Alan is co-founder and owner of Sonoma Compost with Will Bakx. Alan is also a part-owner in Double A Walnuts, a 120-acre walnut farm in the Sacramento Valley. He will work with Will Bakx to manage all services and activities related to composting operations and product marketing.</p> <p>He has 37 years of farming and composting experience, including as a former instructor in Ecological Food Production at Sonoma State University in the 1980s, where he also managed the school farm.</p> <p><i>Alan has lived and worked in Sonoma County since 1974.</i></p>

Name	Role
 <p>Roy Alper Managing Principal reBio LLC</p> <p>707-240-4222 ext. 3 direct 510-882-4782 mobile roy@renewablesonoma.com</p> <p>30 years of experience</p>	<p>Lead Developer Secondary Point of Contact</p> <p>Roy will lead development of our team's overall solution, including financing and contract negotiations.</p> <p>Roy has 30 years of experience in the development, regulation and financing of alternative energy systems. He is an attorney with extensive experience in negotiating agreements for renewable- and waste-fueled projects, including feedstock supply and fuel amendment agreements, offtake agreements, wastewater discharge and solids disposal agreements, obtaining environmental and land use approvals and in leading project development from conception to operation.</p> <p><i>Roy has worked in Sonoma County since 2014.</i></p>
 <p>Christine McKiernan Vice President of Technology & Development BIOFerm Energy Systems</p> <p>608-467-5523 direct 609-287-4089 mobile mcch@biofermenergy.com</p> <p>30 years of experience</p>	<p>Anaerobic Digestion Manager</p> <p>Christine will manage the process design, delivery, and operation of the BIOFerm anaerobic digestion system proposed for the Project.</p> <p>She has over 30 years of experience designing, constructing, operating, and troubleshooting anaerobic processing and aerobic treatment projects, including for the capture of methane from biogenic materials, such as food processing waste, agricultural crops, and animal slaughter. She has experience in dry fermentation, wet fermentation, small-scale anaerobic digestion, and gas processing. With BIOFerm for the past six years, she is responsible for project development, design, scheduling, and budgeting over \$30 million in project revenue; multi-national team building and development for implementation of cost and progress tracking procedures; design review process; technology; project management training; and operations support, cost reductions, and safety programs.</p> <p>Christine is based in Wisconsin.</p>

Name	Role
 <p>Steve Hamilton Sr. Vice President SCS Energy</p> <p>707-236-3798 direct 707-695-8543 mobile shamilton@scsengineers.com</p> <p>38 years of experience</p>	<p>EPC Manager – Principal</p> <p>Steve will be responsible for all SCS work product and services provided, schedule & budget adherence, and overall client satisfaction. He will manage resource availability and sequencing and execution of technical activities related to engineering, procurement, and construction.</p> <p>Steve manages SCS Energy, which specializes in biogas-to-energy feasibility studies and investigations, and the testing, design, installation, and operation of biogas facilities. He has 38 years of environmental project experience, with particular emphasis in solid waste management, ranging from hands-on participation in field and design work to senior-level direction of design-build projects across the U.S. and internationally.</p> <p><i>Steve has lived and worked in Sonoma County since 2003 and is based in SCS's Santa Rosa office.</i></p>
 <p>Suzanne Sturgeon Health & Safety Manager SCS Energy; SCS Field Services</p> <p>707-637-4546 direct 707-619-4231 mobile ssturgeon@scsengineers.com</p> <p>12 years of experience</p>	<p>EPC Health & Safety Officer</p> <p>Suzanne will be responsible for developing and overseeing our Team's compliance with a site-specific health and safety plan for the project. She will also perform site inspections and provide safety training as needed.</p> <p>Suzanne ensures compliance with company, industry, and regulatory safety standards by promoting a proactive, behavior-based safety culture. She has 12 years of safety experience — all with SCS.</p> <p>Suzanne is based in SCS's Long Beach office.</p>

Name	Role
 <p>Leslie Lukacs Director of Zero Waste SCS Engineers</p> <p>707-236-3786 direct 707-484-0441 mobile llukacs@scsengineers.com</p> <p>21 years of experience</p>	<p>EPC Manager – Government Affairs and Community Education</p> <p>Additional Point of Contact – Community Engagement</p> <p>Leslie will manage communication between team members, City/SCWMA staff, vendors, regulators, and other stakeholders, as well as sequencing and execution of activities related to community and stakeholder engagement. She will also design and manage implementation of a Zero Waste Plan for our Solution, with emphasis on clean materials education, incoming materials sorting, and environmental compliance.</p> <p>Leslie is a pioneer in zero waste with 21 years of experience influencing waste reduction and reuse in California. She specializes in the design and implementation of comprehensive sustainability programs for large venues, and events throughout the nation. Leslie represents the Town of Windsor on the Local Task Force and is co-founder and co-chair of the Compost Coalition of Sonoma County, a diverse group of citizens and organizations with a simple mission: keep and process our organic materials in Sonoma County.</p> <p><i>Leslie lives in Sonoma County and is based in SCS's Santa Rosa office.</i></p>

Name	Role
 <p>Patrick Sullivan, CPP, REPA, BCES Sr. Vice President SCS Engineers 916-361-1297 ext. 26 916 -804-8075 mobile psullivan@scsengineers.com 28 years of experience</p>	<p>EPC Manager – Permitting</p> <p>Pat will manage all permitting activities for the Project.</p> <p>Pat manages SCS's Southwestern Region and is an SCS National Expert on air quality permitting and compliance and GHG emissions. He has prepared numerous local air district, state, and federal permitting documents for the installation of a wide variety of industrial systems. He is known and respected by regulators and clients alike for his knowledge of the solid waste regulatory landscape in California, his advocacy, his expert testimony, and his ability to help clients solve complex compliance challenges in practical ways. Pat has 28 years of experience in environmental engineering — all with SCS.</p> <p>Pat is based in SCS's Sacramento office.</p>
 <p>Bob Viers, PE Vice President SCS Energy 562-637-4550 direct 714-615-0940 mobile bviers@scsengineers.com 28 years of experience</p>	<p>EPC Manager – Engineering; Procurement and Construction</p> <p>Bob will oversee the engineering and construction of the Renewable Sonoma solution. This will involve working closely with Jose de la Lama and coordinating the activities of all key staff and specialty subcontractors; monitoring the construction budget and schedule; and ultimately ensuring a successful design-build.</p> <p>Bob has 28 years of varied industrial design engineering, manufacturing, and design-construction experience. He has significant capability in the review of proposals and bids; compliance with specifications, codes, regulations, and standards; equipment inspections during fabrication; management of personnel; preparation of budgets; equipment commissioning; schedule adherence; and problem resolution.</p> <p>As SCS Energy's lead design engineer for biogas - to-energy projects throughout the U.S. Bob is ideally suited to manage procurement and construction on the SCWMA Project.</p> <p>Bob is based in SCS Energy's Long Beach office.</p>

Name	Role
 <p>Jose de la Lama Western Regional Construction Manager SCS Engineers</p> <p>571-353-2039 direct 562-714-5432 mobile idelalama@scsengineers.com</p> <p>32 years of experience</p>	<p>As SCS's Western Regional Construction Manager, Jose is responsible for the management and execution of complex design, design-build, and construction projects in North, Central, and South America. Projects have involved land development for industrial, commercial and residential structures, including office buildings, hotels, hospitals, and residential communities, as well as infrastructure projects such as roadways, irrigation canals, pipeline systems for municipal water use, storm and sanitation sewers, pump stations, underground and elevated storage facilities, water tanks, and water and sewer treatment plants.</p> <p>Since joining SCS in 2008, Jose has applied his 32 years of construction industry expertise to SCS's Field Services-Construction division, where he has successfully performed numerous cost evaluations, construction plans, and project constructions. His hands on construction experience and professional engineering skill sets have facilitated the successful completion of multiple projects related to landfill gas collection systems, landfill gas treatment facilities, landfill gas-to-energy facilities, LFG pipelines, and related site remediation and redevelopment.</p> <p>Jose splits his time between job sites in the Western U.S., where he is based in SCS's Long Beach headquarters, and SCS's Reston, VA office.</p>

Project Development: reBio

James Tsui – Financial

James holds the position of Principal, Development with reBio. He will be responsible for financial analysis, project structuring, problem-solving, and other aspects of on-the-ground project development and management. Working closely with Roy, James has also been actively preparing to respond to the SCWMA RFP for the past three years. Since 2014, he has:

- Canvassed the market in Sonoma County for an agricultural-based energy project that represents a solution to the waste problem in the County.
- Solicited input from community members as to their preferred types of solutions.

- Studied the technologies that could be applied to a potential solution.
- Evaluated potential projects for their economic viability in the current marketplace.
- Participated in reBio/SCS's November 2016 proposal response to SCWMA's RFI.

With an MBA in finance, a BSE in industrial engineering, and over 30 years of experience in the energy sector, James has specialized in energy development projects for nearly 25 years. He worked closely with Roy on the Redbank Power Project in Australia; has experience in wind, solar, and biomass development; and played an integral role in the successful development and commissioning of CalRenew-1, California's first solar power plant connected to the grid.

James has lived and worked in nearby Yolo County for the past 20 years.

Brian Eberly - Technical

Brian is the Technology Principal of reBio, where he focuses on assessment of GHG emissions and feedstock energy potential. He will be directly involved in the refinement of sizing analysis and will participate in our team's communication with City staff, LTP staff, SCWMA staff, and other stakeholders and interested parties to arrive at a right-sized solution. He has been researching and developing precursor concepts for the SCWMA organics processing facility for over a decade.

- Between 2014 and 2016, Brian led a survey and study of county organics volume and quality, and the potential energy-related uses for each. Because of this unique, project-specific experience, he understands the ideal scale of the organics processing facility as well as, if not better than, any other consultant.

Until 2014, Brian was Chief Operating Officer of Yokayo Biofuels, a local producer and distributor of bio-diesel made from local waste cooking oils.

Brian has lived and worked in Sonoma County since 2004.

Anaerobic Digestion: BIOFerm

Nadeem Afghan

Nadeem is the President and CEO of BIOFerm. He will have overall responsibility for the timeliness and quality of equipment and services provided by BIOFerm, and will manage contract execution. Under his leadership for the past eight years, BIOFerm has become one of the nation's leading providers of turnkey biogas technology solutions in the U.S. He has 24 years of experience in the engineering and biogas industries, including 10 years in a national sales manager capacity for his prior employer.

Drew Witte, PE

Drew is an Electrical Engineer with BIOFerm. He will be the lead electrical systems and controls engineer for BIOFerm on this Project. He has 12 years of experience re-commissioning renewable energy electrical control systems (municipal solid waste gasification system and biomass to syngas system), designing and building electrical control systems for CNC milling machines, CNC welding machines, and vision inspection machines for aerospace, pharmaceutical, and consumer goods.

Steven Sell, PE

Steven is the Manager of Application Engineering for BIOFerm. He will lead commissioning and biological activity start-up and biogas production optimization. Steven has six years of experience in the biogas industry, specializing in the areas of co-substrate anaerobic digestion and gas purification. He has played a significant role in the design and commissioning of BIOFerm biogas technologies in the U.S.

Dina Bertolini, PE

Dina is a Project Manager with BIOFerm. She will manage all contributions to the Project by BIOFerm staff. She has been a project manager for over 10 years and a practicing engineer for over 13 years.

All BIOFerm staff are based in Madison, Wisconsin.

Engineering, Procurement, and Construction Prime Contractor: SCS
Engineers/SCS Energy

Management

Steve Hamilton: EPC – Principal
Suzanne Sturgeon – Health & Safety
Leslie Lukacs: EPC– Government Affairs and Community Engagement
Bob Viers: EPC – Procurement and Construction; Engineer
Jose de la Lama – EPC - Construction
Patrick Sullivan – Permitting

Technical

Ambrose McCready: Engineer
Michael O'Connor: Permitting
Andy Heffel: Sr. Estimator
Jonathan Meronek – Storm Water

Steve, Leslie, Jonathan, and Michael are all based in SCS's Santa Rosa office, only 12.5 miles from the City's offices at 4300 Llano Road. Pat and Ambrose are based in SCS's Sacramento office. Bob, Jose, and Andy are based in SCS's Long Beach, CA headquarters. Not only are several of the key SCS team members based in Santa Rosa, but SCS has completed some 450 projects in Sonoma County.

EPC – Principal

SCS Energy (SCSE) Sr. Vice President, Steve Hamilton, will have overall responsibility for all aspects of project permitting, regulatory compliance, compost facility engineering, balance-of-plant design, and facility construction and start-up.

EPC – Health & Safety

SCS Health & Safety Manager, Suzanne Sturgeon, will be responsible for developing and overseeing our Team's compliance with a site-specific health and safety plan for the project. She will also perform site inspections and provide safety training as needed.

EPC – Government Affairs and Community Engagement

SCS Zero Waste Director, Leslie Lukacs, will ensure:

- Positive communication between all team members, SCWMA staff, and other stakeholders and interested parties.
- Efficient execution and tracking of day-to-day activities.
- Timely, detailed reporting.
- Adherence to schedule and budget.
- Application of Zero Waste best practices throughout the Project, particularly during construction.

EPC – Permitting

SCS Sr. Vice President, Pat Sullivan, will manage permitting activities. He is exceptionally responsive to client needs and knows the solid waste permitting regulations and best practices as well as any consultant in the state.

He will be supported by Michael O'Connor, who has worked with Pat for the past 10+ years, and Jonathan Meronek, SCS's Storm Water Manager for the Southwestern U.S.

Michael will interact with the BAAQMD and other regulators and third-parties, as needed, in order to secure required permits as quickly as possible. He has extensive knowledge of federal, state, and local air quality regulations, greenhouse gas (GHG) regulations, and CEQA requirements, and has assisted clients in numerous regulatory jurisdictions within California, including the BAAQMD. *Michael is based in SCS's Santa Rosa office.*

Jonathan will oversee all aspects of storm water management. With SCS for 15 years, he is knowledgeable of regulations and best practices affecting storm water regulatory compliance in California, and is highly responsive to client needs for excellent communication and practical, cost-effective solutions. *Jonathan lives in Sonoma County and is based in SCS's Santa Rosa office.*

Pat will also be supported by two superbly qualified subcontractors: Matthew Cotton, owner of Integrated Waste Management Consulting, and Darren Wiemeyer, owner of Wiemeyer Ecological Sciences.

EPC – Engineering; Procurement & Construction

SCS Energy Vice President, Bob Viers, will oversee the design and construction of the Renewable Sonoma Solution. This will involve coordinating the activities of all key staff and specialty subcontractors (drillers, electricians, etc.), monitoring construction budget and schedule, and ultimately ensuring a smooth and highly successful design-build.

For engineering activity, he will be supported by SCS's Sr. Engineer for the Western U.S., Ambrose McCready, and Sr. Sustainable Materials Management Expert, Bruce Clark.

And for Procurement and Construction activity, he will be supported by SCS's Western Regional Construction manager, Jose de la Lama, and Sr. Estimator, Andy Heffel.

All SCS management and technical professionals will work together to manage all project activities, optimize scheduling efficiencies, keep costs under control, and ensure positive communication between all parties at all times.

Other key SCS staff from various SCS practice areas will bring specialized expertise and value to our team, as needed (e.g., SCS's Environmental Services Division routinely identifies and assesses the location and condition of wells and septic tanks. If this service is needed, SCS can provide prompt, competitively priced support, as well as support in many other areas of environmental and solid waste consulting).

Subcontractors

Engineered Compost Systems

CASP Composting System Design, Equipment Supply, and Installation & Operations Support & Training

Tim O'Neill, President

Mr. O'Neill is president and founder of ECS (2000) and president and founder of Measurement Technology Northwest (1986), ECS's sister company. He has worked in the composting industry since 1993 and has been responsible for the development and manufacture of composting process control systems, and the supervision of in-vessel and ASP design, research development, fabrication, and project management. He has provided compost engineering consulting for scores of municipal and commercial clients, and is a recognized expert in compost aeration and control, regulatory compliance, process control & monitoring technology, odor control, feedstock preparation, and material handling. Mr. O'Neill is a frequently invited speaker at professional conferences, including US Composting Council (USCC), BioCycle, Canadian Composting Council, SWANA, Waste Expo, Washington Organic Recycling Council (WORC), and Northwest Biosolids Management Association. He teaches compost aeration design at USCC compost operators training courses.

Wiemeyer Ecological Sciences

CTS Mitigation

Darren Wiemeyer

Darren Wiemeyer is a former SCS employee in SCS's Santa Rosa office. He has owned his own consulting practice since 2007, specializing in wetland delineations, biological studies, special-status species surveys and habitat assessments, habitat restoration and monitoring, mitigation and conservation banking, regulatory permitting and resource planning, biological construction monitoring, and storm water compliance.

He has experience performing surveys and implementing mitigation measures for numerous wildlife species, including California tiger salamander (CTS), California red-legged frog, foothill yellow-legged frog, northwestern pond turtle, burrowing owl, desert tortoise, spotted owl, marbled murrelet, and various birds of prey and native birds. He also has experience with mitigation planning and regulatory consultation assistance for several federally listed plant and animal species.

Craig Communications

Community Engagement

Tracy Craig

Founded in 2000, Craig Communications is a small, woman-owned business that has successfully designed and implemented over 300 community relations programs for complex, often controversial environmental redevelopment projects with multiple stakeholders. About 90 percent of their work involves supporting clients with environmentally sensitive projects.

Tracy Craig, the firm's founder and Principal, worked for the department of Toxic Substances Control (DTSC) for ten years, and was instrumental in the design and roll-out of DTSC's public participation program – a program that is still used by DTSC and RWQCBs today. Tracy is well-known and respected within the DTSC, various RWQCBs, and the EPA. Tracy and her staff have over 75 years of outreach experience in California, and have provided a variety of trainings on subjects such as: conducting culturally relevant outreach in response to California's changing demographics; designing outreach programs that work for the Latino and Vietnamese population; how to use social media to engage the public in a meaningful manner; and the importance that trust and relationships play in risk communication.

Craig Communications currently provides public participation support on 64 projects that are overseen and approved by DTSC and RWQCBs, as well as the EPA.

Integrated Waste Management Consulting

Permitting Support

Matthew Cotton

Matthew Cotton will support the Renewable Sonoma team by fulfilling the key role of encouraging all regulatory agencies to work together to optimize permitting efficiencies as mandated by AB 1045. In practice, most agencies have not yet fully embraced this initiative. Therefore, this position is a key component of our schedule management plan.

Matthew has worked in organics and solid waste management since 1986. He has served as a consultant, educator, researcher, and advocate for new and expanded organics recycling and composting programs in California and beyond. Mr. Cotton has completed hundreds of significant organics projects, including permitting and assisting in the development of some of the major composting facilities in California. Mr. Cotton has served on the Board of Directors of the US Composting Council for over a decade, including as president for three years, and also serves on the Board of Californians Against Waste. He has published research on compost odors, compost use, climate impacts, compostable plastics, and compost facility infrastructure. He is the main author of both the SWANA Managing Composting Programs Course, and SWANA's course on Organics Collection; and the organics chapter of the SWANA/CRRA Zero Waste Course.

In over 30 years of work Mr. Cotton has become a respected resource for all aspects of organics recycling. From providing permitting assistance to new and expanded composting, anaerobic digestion, and chipping & grinding facilities, to providing hands on odor control mitigation at organics processing, digestion, and composting facilities, to conducting important statewide studies of the California organics industry.

EXPERTISE AND EXPERIENCE

Sonoma Compost - Organics Processing Systems, Product Sales, Operations Management.

Founded by Will Bakx and Alan Siegle in the early 1990's, [Sonoma Compost](#) grew to become one of the pre-eminent composting companies in California.

SCWMA contracted with Sonoma Compost to provide composting services to residents, business owners, and farmers throughout Sonoma County from 1993 to October 2015.

Operations were located at the Sonoma Central Disposal Site. In late-2015, SCWMA reluctantly agreed to terminate its contract with Sonoma Compost after 22 years of what many believed to be a model public-private partnership.



During this time, Sonoma Compost facilitated diversion of over 1.8 million tons of organics from the Sonoma Central Disposal Site, produced a series of compost and mulch products that met local farmers' needs for high-quality products at very competitive prices, employed 25 local residents, and created work for many contract truckers and haulers who lived in Sonoma County.

Under the leadership of Will and Alan, Sonoma Compost:

- Grew to become the largest provider of composting services in the Greater Sonoma County Region.
- Produced the highest quality compost available in the County.
- Operated at a reasonable profit.
- Donated compost to Sonoma County schools and non-profits.
- Hosted educational field trips for students, gardeners, farmers, etc.
- Taught an introductory course on Agricultural Composting at Santa Rosa Junior College (SRJC) for 13 years (Will Bakx), and is currently developing a compost certification program at SRJC.
- Passionately supported many additional educational and charitable causes.
- Embraced and solved many unique recycling challenges (chicken feathers, sea urchin residue, diatomaceous earth, grape lees, etc.).
- Designed and implemented a successful pilot food scrap recycling program for the City of Sebastopol.
- Managed a highly successful [vegetative food scraps recycling campaign](#) that involved educating nearly every restaurant owner/manager in the City of Sonoma.
- Maintained a tireless commitment to educating residents and businesses on why composting is important and how to do it successfully and efficiently through over two decades of workshops, community events, presentations, talks, and videos.
- Became known and valued by thousands of residents, business owners, farmers, landscapers, and community and civic leaders throughout the County.



Will co-founded the California Organic Recycling Council (CORG) and California Compost Coalition (CCC) and has served on the Board of each organization since its inception. He chaired CORG for many years and is the current Chairman of the Board.

A passionate advocate for the composting industry, he has provided education, helped write regulations and legislation, and recently helped develop questions for the U.S. Compost Council's Certified Compost Operation Manager (CCOM) examinations.

Clearly, no other firm is as familiar with the composting landscape in Sonoma County or has anywhere near the proven track record of composting operations performance in the County as Sonoma Compost.

Community Support

Overwhelmingly enthusiastic support for the return of Sonoma Compost is illustrated by the letters of support received from a wide spectrum of communities in Sonoma County, including agricultural and environmental organizations. Copies of these letters are provided in **Appendix B**.

This outpouring of support is further illustrated by an email received on January 10, 2018 from a Community Alliance with Family Farmers (CAFF) policy committee member, reproduced with permission below. (Will had to leave the 40th Anniversary celebration meeting early to work on this proposal.)

It was very good of you to come help CAFF celebrate last night. After you left several of the speakers mentioned you. I told folks where you went and why and you should have heard the cheers from your chair at the computer.

We wish you every good fortune.

have a great week - and thanks for all of it, Will.

Rue Furch

Availability

As long-time residents of the County, Will and Alan are invested in this opportunity whole-heartedly and are eager to return to serving the full-service composting needs of the residents, businesses, farmers, and civic leaders in the County. They are ready to rekindle the positive relationships they have maintained, as quickly as possible, and are fully committed to managing the new composting operation to the full satisfaction of City/LTP/SCWMA management, the regulatory community, and the residents, businesses and farmers in Sonoma County.

Licenses and Certifications

Will Bakx is a Certified Compost Operator through the Washington Organics Recycling Council.

Educational Documents and Videos

Links to various documents and videos developed by Sonoma Compost for the benefit of the composting communities in Sonoma County (and throughout the U.S.) are embedded throughout this proposal.

Similar Project Experience/References

Sonoma Compost's 22-year track record of providing composting services to SCWMA is detailed above.

In the past two years, Sonoma Compost has worked with West Marin Compost (WMC) in Nicasio to optimize that facility's efficiency and viability. Many former customers of Sonoma Compost now purchase compost and mulch from WMC. This has led to Sonoma Compost re-establishing some of its products for sale at the WMC facility, albeit in smaller volumes. Sonoma Compost has also provided compost for use in a statewide carbon farming demonstration project, and currently participates in an emissions study with UC Berkeley. West Marin Compost is included as one of the nine references provided in Table 4 on Page 54.

reBIO - Project Development, Contract Negotiations, Financing

Recent Direct Experience Developing Organics Processing in Sonoma County

Under the leadership of Roy Alper, Principal of reBIO, our team has been working on developing an organics processing solution for SCWMA since 2014.

In 2015, reBIO submitted a proposal to SCWMA to develop an anaerobic digestion operation at the Sonoma Central Disposal Site. The manager of the landfill, Republic Services, determined the anaerobic digestion facility was no longer an option due to third party liability.

Renewing its efforts, reBIO began a dialogue with Laguna Treatment Plant (LTP) management in October 2016. This dialogue identified various needs and desires each had and ways each could contribute to meeting them. Over the course of multiple meetings, it became clear that LTP and Renewable Sonoma, working together, had a truly unique opportunity to create a dynamic "Win-Win-Win; Win-Win-Win" solution.

In November 2016, reBio and SCS responded to a Request for Information (RFI) for Organics Processing issued by SCWMA (Sonoma Compost and BIOFerm have subsequently joined our team).

In May 2017, we presented a mutual Non-Disclosure Agreement (NDA) to the City of Santa Rosa (City) and were poised to present a Letter of Intent (LOI) that would include the multiple benefits each party could offer to the other. Before either the NDA or LOI could be executed, the City announced that it was making land available to all participants who participated in the SCWMA RFP, requiring our dialogue to be placed on hold.

Roy's colleagues at reBIO, James Tsui and Brian Eberly, have worked closely with Roy on all of the above efforts to develop a new organics processing facility in Sonoma County.

Availability

More than any other team, our team has shown a commitment and passion to helping the City/SCWMA keep these much-needed community services moving forward through the challenging pre-development process. We have shown we are dedicated, proactive, and solution-focused. This is in large part due to Roy's project development leadership.

Roy, James, and Brian are available and fully committed to helping the City/SCWMA see this Project through to completion and successful operation.

Client Evaluations

In his career, Roy has been elected to serve on the Board of Directors of Consumer Federation of America, Consumer Federation of California, Nationwide Insurance Company, Independent Energy Producers Association and the Jobs and Housing Coalition.

Similar Project Experience/References

reBIO was formed in 2014 to provide renewable energy project development services, primarily in California, and specifically for this project in Sonoma County. reBio is exclusively focused on developing the organic materials processing facility Sonoma County needs.

Principal of reBio, Roy Alper, has 30 years of project development know-how in the alternative energy and real estate sectors. He has focused on development of pathfinding projects, some of which have been honored with outstanding awards. Project examples that speak to Roy's professionalism, commitment, and success in solving the myriad issues that arise in any project development, and his leadership in seeing development projects through from conception to operation are highlighted below in Table 2.

Table 2. reBIO Project Experience

Project	Location	Description	Size	Date
State of California	U.C. Berkeley and three other facilities	First non-utility gas-fired combined cycle power & district heating plants	Each 25 MW Each ~ \$26 million	1985-87
GWF Power	Four locations in Contra Costa County, CA	First non-utility fluidized bed boiler waste fueled power plants meeting CA emissions standards	Each 20 MW Each ~ \$30 million	1987-90
Redbank Power Australia Environmental Engineering Project of the Year 2001	New South Wales, Australia	First fluidized bed boiler fueled by waste coal fines	120 MW \$200 million	1994-2001

<p>Temescal Place</p> <p>Gold Nugget – Best Workforce Housing Project in the West (2004) - Pacific Coast Builders Conference</p> <p>Finalist – Community Impact Deals of the Year (2005) - San Francisco Business Times</p>	Oakland, CA	First private sector housing project in the Temescal district of Oakland in 75 years	33,000 sq. ft. \$8 million	2002-2004
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BIOFerm – Anaerobic Digestion Equipment and Related Support

Established in 2007 and based in Madison, Wisconsin, BIOFerm™ Energy Systems (“BIOFerm”) provides turnkey anaerobic digestion and gas upgrading systems, and project development and consulting engineering services to North America’s biogas market.

BIOFerm has installed nearly 500 anaerobic digestion systems and over 900 pressure swing adsorption systems (including 90 gas upgrading). Systems include: Carbotech pressure swing adsorption (PSA) gas upgrading, BIOFerm™ dry fermentation anaerobic digestion, and Schrack COCCUS® wet fermentation anaerobic digestion and EUCO®/EUColino plug-flow anaerobic digestion.

BIOFerm is the exclusive provider and North American licensee of Germany-based Viessmann Group’s biogas and gas processing lines, BIOFerm became an independent U.S. company in 2017.

BIOFerm is the first company to bring industrial-scale dry fermentation anaerobic digestion and small-scale plug and play anaerobic digestion to North America.

Of the approximately 20 engineering, management, sales, marketing, and administrative staff employed by BIOFerm, five will be dedicated to the SCWMA Project:

- Christine McKiernan, VP of Technology and Development: Overall process concept design & project sustainability; contract negotiation.
- Drew Witte, Electrical Engineer: Electrical systems and controls engineering.
- Steven Sell, Manager Application Engineering: Commissioning and biological activity startup; biogas production optimization.
- Dina Bertolini, Project Manager: Technical and administrative project support.
- Nadeem Afghan, President and CEO: Overall responsibility for all BIOFerm services, equipment performance, and contract negotiation/compliance.

System Benefits

BIOFerm’s diverse suite of system offerings allows for a seamless, sustainable, and economical integration of organic waste management and gas purification solutions into a

variety of operations: landfills, wastewater treatment plants, food processors, agricultural operations, and more.

BIOFerm's gas upgrading clients realize cost savings through purifying biogas to renewable natural gas (RNG) for pipeline injection or CNG/LNG fuel with low Carbotech PSA operating/maintenance costs and high processing efficiency/methane yield. Additionally, BIOFerm's industrial- to small-scale anaerobic digestion systems enable clients to utilize biogas as clean energy, reduce waste disposal fees in areas with high tipping fees, manage nutrients, and create sellable digestate products as fertilizer, compost, etc.

Awards

2016 American Biogas Council "Institutional Project of the Year" – University of Wisconsin Dry Digester Project, Wisconsin.

2015 American Biogas Council "Biogas Project of the Year" – Rosendale Dairy Digester Project, Wisconsin.

Availability

The BIOFerm key staff identified above are all available for the full duration of the Project, up to and including start-up and ongoing operations and maintenance (O&M).

Similar Project Experience/References

Renewable Sonoma is proposing to install BIOFerm's COCCUS technology, installed at over 500 sites worldwide, including four in the U.S. Contact information for two of the U.S. installations is provided below. SCWMA is welcome to contact these BIOFerm clients to seek feedback on how the COCCUS technology is working if you so desire.

KB BioEnergy (COCCUS + EUCO Digesters)
2677 Riverview Rd, Akron, OH 44313
Annette Berger, VP of Operations
(330) 864-2621

Rosendale Dairy (COCCUS Digesters)
N8997 Cty TK M, Pickett, WI 54964
Scott Rateczak, Plant Manager
(920) 229-9160

Two project descriptions, representative of BIOFerm's recent and relevant experience and leadership role in anaerobic digestion in the U.S. are provided below. Both clients are included as references for BIOFerm in Table 4 on Page 54.

GAS UPGRADING TO RENEWABLE NATURAL GAS (RNG) FOR GRID INJECTION AT LARGE FOOD PROCESSING FACILITY, Guymon, OK

Client	High Plains Bioenergy 3291 Desert Rd. Guymon, OK 73942	
Contact	Bill Patrick Sr. Director of Operations (816) 238-7928 william.patrick@hpbioenergy.com	
Dates	2017 - Ongoing	 
Budget	Confidential	
BIOFerm Staff	Dina Bertolini, Steven Sell, Drew Witte, Nadeem Afghan	

Background

High Plains Bioenergy (HPB), a subsidiary of Seaboard Foods and a major North American food processor, is in the commissioning phases for their Carbotech Pressure Swing Adsorption (PSA) gas upgrading plant. Once complete, the plant will generate renewable natural gas for pipeline injection. HPB has traditionally fueled boilers with the gas generated from anaerobic digestion of pork processing waste, but has identified gas upgrading and grid injection as a sustainable alternative. The biogas recovery plant will operate using a pre-manufactured Carbotech PSA biogas upgrading and grid injection system provided by BIOFerm. Once running at full capacity, HPB's biogas upgrading plant will produce annually 440 million standard cubic feet of pipeline-quality RNG for grid injection from anaerobic digestion-derived biogas. This is equivalent to the gasoline usage of approximately 6,743 U.S. cars. These environmental offsets will help HPB realize their sustainability and alternative energy goals.

Challenges

BIOFerm was contracted to:

- Provide a comprehensive suite of design, engineering, permit assistance, construction, commissioning, operator training, and remote support services.
- Secure higher dollar value end use for the biogas generated from HPB's pork processing lagoons.
- Purify biogas to exceed quality requirements for injection into the natural gas grid.

Outcomes and Benefits

- The plant was designed, constructed and commissioned in 12 months.
- Raw gas input is currently at 60% of installed capacity.
- BIOFerm is currently providing remote support assistance.

DIVERT MUNICIPAL ORGANICS TO ANAEROBIC DIGESTION, Edmonton, Alberta, Canada

Client	City of Edmonton Site 100, Edmonton Waste Mgmt. Ctr. 250 Aurum Road N.E. Edmonton, Alberta T6S 1G9, Canada	
Contact	Daniel Alberkant Senior Project Engineer 780-442-7091 daniel.alberkant@edmonton.ca	
Dates	2016 - Ongoing	
Budget	Confidential	
BIOFerm Staff	Dina Bertolini, Steven Sell, Drew Witte, Nadeem Afghan	

Background

The City of Edmonton, Alberta, along with the University of Alberta and BIOFerm Energy Systems, began constructing an anaerobic digester in 2016 to generate energy from organic waste. BIOFerm's High-Solids anaerobic digester will aid in the City's goals of 90% diversion of residential waste from landfill and greenhouse gas emissions reduction. By incorporating anaerobic digester into Edmonton's existing composting operation, this project maximizes value of both digestate and biogas products from organics anaerobic digestion, and helps achieve sustainability and alternative energy goals. The new BIOFerm Dry Fermentation system will process 40,000 tonnes/year high-solids organic waste supplied by the City of Edmonton and the University of Alberta (facility design can handle 48,000 tonnes/year organics). The 1.426 MW facility will allow the Edmonton area to divert food and yard waste to generate enough clean energy to annually provide ~1,107 homes with electricity and heat ~1,031 homes. The project will offset 46,000 metric tons CO₂/year. Additionally, approximately 20,000 tonnes/year high-quality organic compost will be generated for sale.

Challenges

BIOFerm was contracted to:

- Provide process design, construction supervision, commissioning, operator training, and remote support services.
- Integrate the BIOFerm dry fermentation anaerobic digestion system into the City of Edmonton's existing composting operation.
- Achieve 90% diversion of residential waste from landfill in Edmonton.
- Meet Edmonton's greenhouse gas reduction goals.

Outcomes and Benefits

- The plant was designed over the course of 2016 and 2017. Construction began in 2017 and is expected to be complete by April 2018, when commissioning will begin.

SCS Engineers – EPC Prime Contractor

SCS's Experience Working in Sonoma County

SCS has been a loyal and reliable environmental engineering contractor in Sonoma County for more than 30 years.

- **Since the late-1980s, when SCS was first contracted by the County to measure the water levels in the gas collection wells at the Sonoma Central Disposal Site, SCS has completed well over 450 environmental services projects in the County, including 27 directly for the County of Sonoma.**
- **Over 150 of these projects have been located in Santa Rosa.**

Figure 2 and 3 below illustrate how widely respected SCS is within Sonoma County and how we are known to deliver what we promise.

NOTE: Due to overlap of project sites, not all projects can be shown individually.

Figure2. SCS Environmental Services Consulting Experience in Sonoma County (2000-2016)

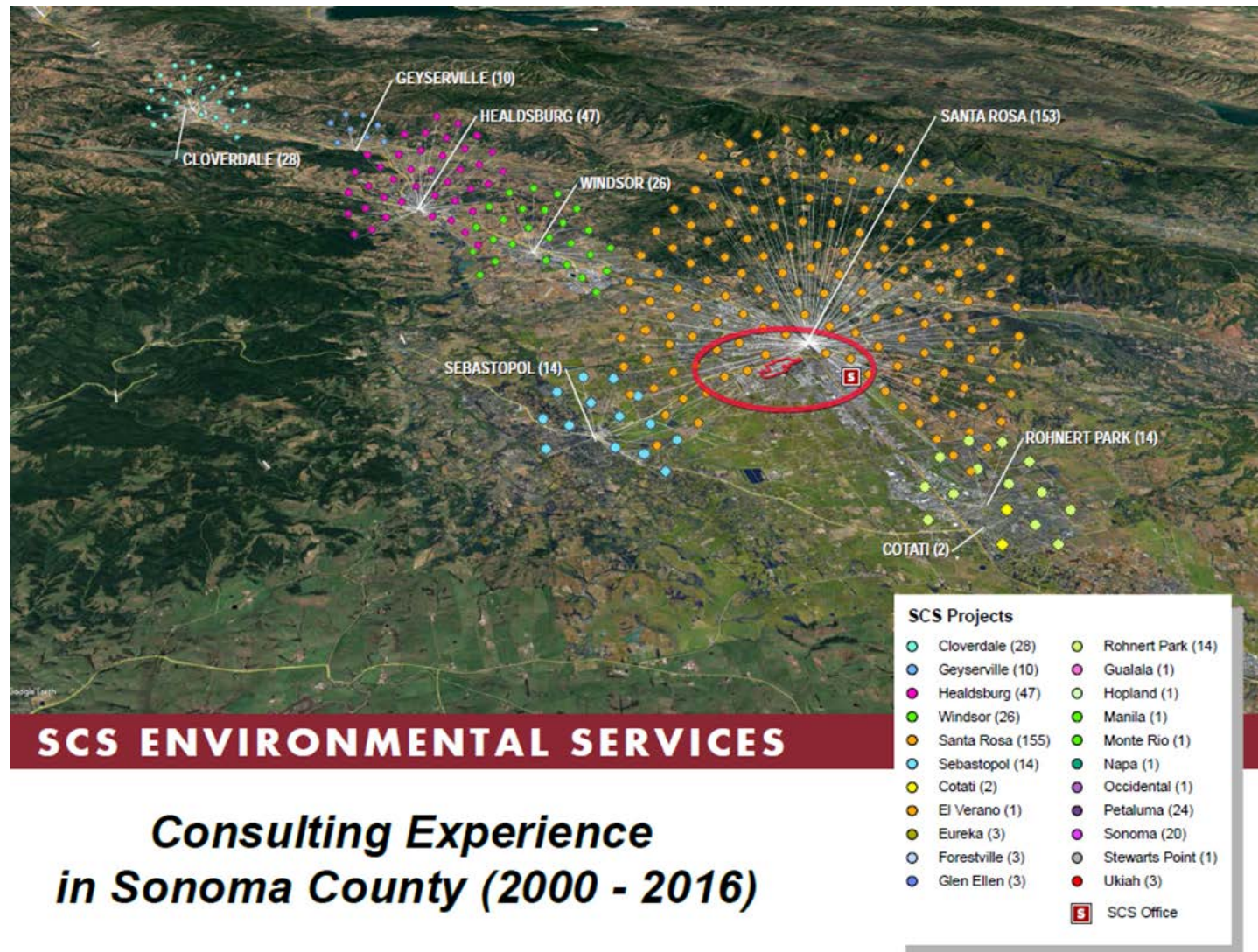
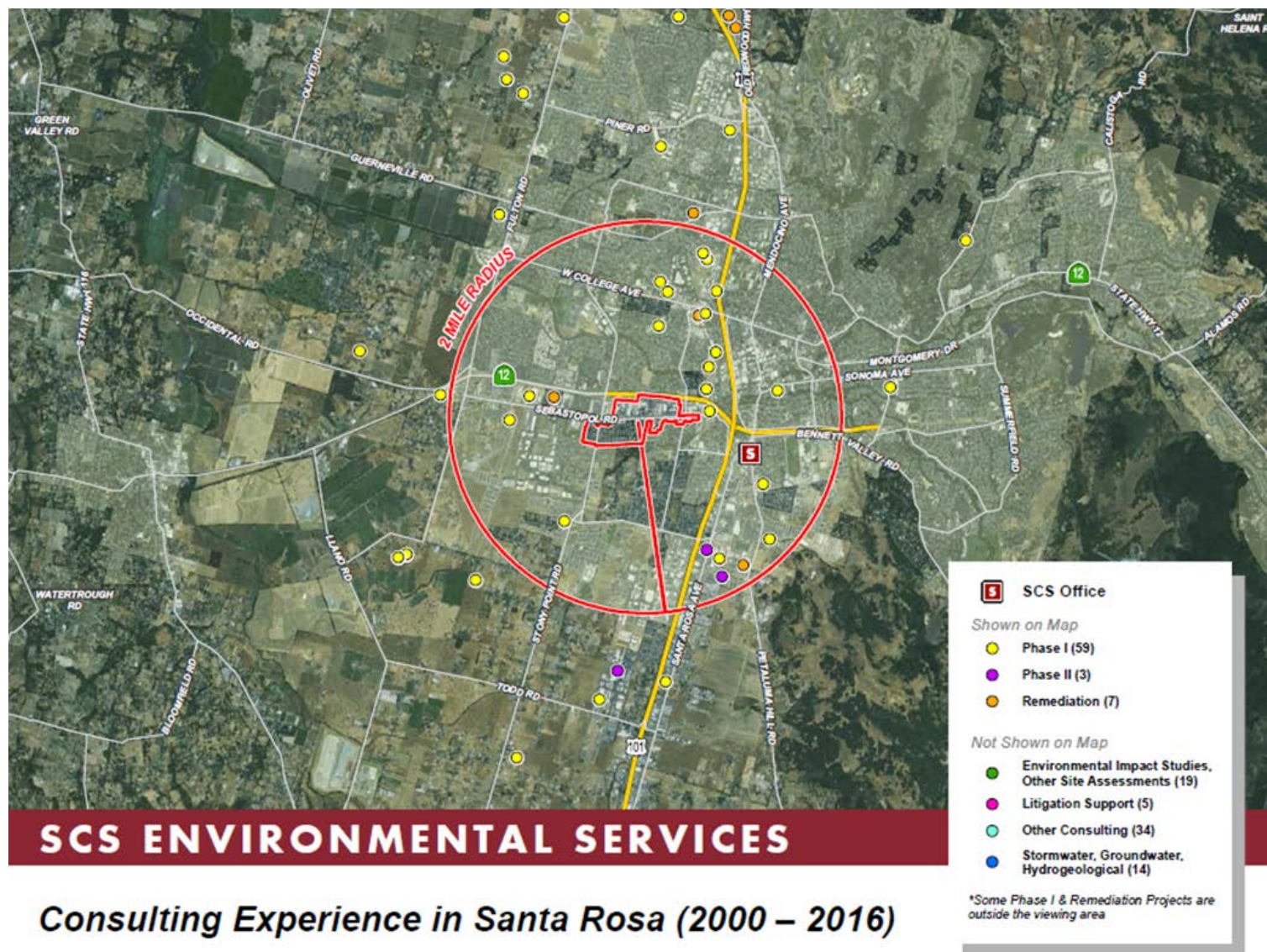


Figure 3. SCS Environmental Services Consulting Experience in Santa Rosa (2000-2016)



Notable projects completed for the County include:

- **Biogas Filtration System, Sonoma Central Disposal Site (2005 to 2007).** SCS studied various LFG purification and compression systems commercially available and determined which was the most economical and reliable choice for the County to employ at the Central Disposal Site. SCS then built a pilot plant based on our recommendation. After a proof of operation run test of 480 hours, we operated the system for a one-year period, performing all O&M services.
- **SCS Remote Monitoring & Control® (RMC), 5 Landfills in Sonoma County (2016-2020).** In 2016, SCS System Integrator, Phil Carrillo, installed a remote monitoring Supervisory Control and Data Acquisition (SCADA) system at 5 closed landfills in the County to monitor water quality. The County has also retained SCS on an on-call basis to provide O&M services through 2020.
- **Landfill Engineering and OM&M Services, Sonoma Central Disposal Site (1999 to Present).** SCS has provided a variety of engineering services during the past 17 years. SCS Field Services has performed routine operations, monitoring, and maintenance services at the Central Disposal Site since 1999.



Why is SCS an Ideal EPC Contractor for this Project?

SCS offers SCWMA full-service solid waste and waste-to-energy capabilities in facility siting; compliance and permitting; hydrogeologic and geotechnical investigations; ground and surface water control systems; gas collection and control systems; ambient air control systems; bioreactors; design, estimating, and construction; safety and risk management; sustainable materials management; OM&M; and state-of-the-art data management technology.

This depth and breadth of SCS's capabilities, SCS's local presence in Santa Rosa, and SCS's four-decade track record of performance, will provide the SCWMA staff responsible for managing this Project with significant peace of mind, knowing SCS is:

- Well-established and proven (47 years in business; 85% repeat business rate).
- Respected by the myriad regulatory agencies in California and across the nation.
- An innovator and pioneer in the solid waste industry.
- Local (in-person meetings can be scheduled with relative ease).
- Known to be client-focused, professional, and trustworthy.

- Large enough to deliver complex solutions at a competitive price, but small enough to react to unexpected situations and shifting client priorities nimbly and with client-focused flexibility.
- Highly collaborative and always quality-of-solution-oriented.
- Committed to value engineering (a philosophy of proactively seeking ways to save our clients time and money one project at a time — knowing it will serve us well in the long-run).

A Few Examples:

SCWMA Waste Characterization Study 2014-2015

Led by Leslie Lukacs, SCS conducted a two-season, countywide commercial waste characterization study for SCWMA in 2014-2015. The study included organics, but was not specifically focused on organics. SCS worked closely with the local hauler to identify incoming waste loads according to the sampling plan. SCS recorded information on each sample, including the geographic origin of the waste, the waste generator type, the sample date/time, and the vehicle type. Once the waste load was discharged, a loader was used to randomly obtain a sample of waste weighing approximately 225 pounds. The waste components were then sorted into 86 distinct material categories. Using the data collected during the field study, SCS calculated the waste composition for the residential and commercial sectors. This data was weighted based on the overall waste tonnages received at the transfer station, in order to calculate an overall waste composition. **This knowledge, experience, and access to current data gives our team unique familiarity with the character of waste generated in Sonoma County, which will facilitate a speedy and accurate beginning to project work.**

*NOTE: Brian Eberly, Technology Principal with reBIO, led a survey and study of Sonoma County organics volume and quality and the potential energy-related uses for each. So, multiple members of our team have unmatched direct experience with studying, understanding, and developing organic materials data in Sonoma County. **This first-hand knowledge will translate into wise and supportable decision-making and give SCWMA considerable peace of mind knowing Renewable Sonoma is operating from a position of knowledge, experience, and professionalism.***

Community Engagement

Under the leadership of Leslie Lukacs, SCS provided services to enhance the Contra Costa County Solid Waste Authority (RecycleSmart) food recycling program. SCS evaluated the “right-sizing” level of service to facilitate increased food recycling and provided program education and training. Opportunities were identified for infrastructure improvements, education needs, and participation efficiencies in food waste recycling.

Project successes included:

- **65% improved from failing to passing** after receiving food waste recycling technical assistance from SCS.

- **26% improved from failing to marginal** after receiving technical assistance from SCS.
- **91% of the 82 businesses targeted improved their contamination levels** after receiving technical assistance from SCS.

Permitting

SCS completed air permitting for the first CASP composting facility in the BAAQMD, and has permitted three similar facilities since that time.

As part of these permitting efforts, SCS:

- Worked with the facility owner/operator and BAAQMD to develop reasonable permit conditions, emission limits, and control requirements.
- Helped to define best available control technology (BACT) to allow both CASPs with biofilters or biocovers as equivalent, and not require controls on curing piles.
- Negotiated with the BAAQMD to remove costly and restrictive best management practices from the permits.
- Assisted each client in developing the most reasonable and flexible permits possible, even though the BAAQMD was increasing the stringency of their requirements for composting operations.

BAAQMD is increasing scrutiny of organics facilities, which has further slowed the already slow permitting process. Cognizant of the critical impact permitting can have on schedule, cost, and overall project value. Renewable Sonoma will provide SCWMA with exceptional permitting assistance.

Value Engineering

City of Modesto

SCS was hired by the City of Modesto to evaluate the groundwater and landfill gas at Carpenter Road Landfill, located in Modesto, California. The site is approximately 27 acres and is divided into two distinct areas (east and west landfill) by Carpenter Road. The cover layer has settled over time leaving an irregular surface that can cause collection and percolation of groundwater into the waste. In order to correct the irregular surface and restore drainage and runoff, the Central Valley Regional Water Control Board (RWQCB) required the City to regrade and final close the landfill areas. The City asked SCS to develop a cost effective approach to meet RWQCB's request.

SCS determined that:

- A partial clean closure of the east part of the landfill and relocation of waste to the west side would allow adequate grades in the west and would not require off-site import of soils.
- An Evapotranspiration (ET) soil cover using on-site soils would be an effective barrier to prevent percolation of rainfall into the wastes.

By not having to import soil for the cover layer, this value-engineered design met all RWQCB objectives and reduced potential project costs by approximately \$1.5 million. Construction is planned for 2018.

DeKalb County Public Works

DeKalb County Public Works retained SCS Energy to design-build and operate-maintain an LFG green energy facility in Ellenwood, Georgia. The County needed to put power into the grid on or before October 12, 2006 to retain its Power Purchase Agreement with Georgia Power, but did not give SCS a Notice-to-Proceed until April 10, 2006. **Bob Viers marshalled resources and applied all of his value engineering dedication and skill to design and construct this project within this highly compressed schedule.**

Innovation

LFG monitoring probe requirements in California necessitate small-diameter gas probes to measure methane and other gases at depths up to several hundred feet around the perimeter of municipal solid waste (MSW) landfills. The deeper you construct the probes, the more vulnerable they are to problems, including blockage from perched or first groundwater covering the perforated zone.

SCS encountered this problem at a northern California landfill site and needed to develop a method of extracting liquid from a ½-inch diameter Polyvinyl Chloride (PVC) casing at depths approaching 200 feet. We looked at small diameter submersible pumps in the market place, but they did not fit in ½-inch casing. Common practice in similar situations is vacuum lifting and blowing air through a stinger tube extending to the probe bottom, which is not very effective.

Much like drinking a milkshake from a straw, applying differential pressure to the liquid surface forces the liquid down. If a straw or return line is situated at the bottom of the liquid column, the liquid will flow up the return line and be measured and contained in the LFG monitoring probe. SCS successfully applied the straw and milkshake approach to LFG probes at the problem site.

SCS's innovative approach to this design challenge not only reduced project costs by \$70,000 to \$80,000, but allowed SCS to accurately measure the volume of liquid removed from each probe.

Creative Problem-Solving

Oregon Environmental Industries retained SCS Energy to design-build and operate-maintain a biogas-to-energy facility in Eagle Point, OR. The Project capital cost needed to be reduced by approximately \$250,000 to meet our client's return on investment (ROI) objective. SCS offered to reduce the capital costs by this amount in return for realizing \$0.04/kWh from the facility power sales for the first few months after the project went on-line. **The client received the facility for the price they wanted to pay and SCS received sufficient monies from the power sales to cover costs and a reasonable profit margin.**

Client-Focused Collaboration

The University of New Hampshire (UNH) desired to reduce their carbon/environmental footprint by utilizing a renewable fuel instead of multiple fuel types, while at the same time reducing their exposure to long-term fuel cost fluctuations. In 2007, in collaboration with the University and Waste Management (WM), SCS designed a biogas-to-energy facility at the Turnkey Landfill in Rochester, NH (operated by WM). To solve the problem of high levels of nitrogen and oxygen in the product gas not meeting pipeline quality standards for minimum Btu content, rather than use existing utility infrastructure, SCS constructed a dedicated pipeline and on-site fuel blending (natural gas augmentation) system. In 2008, SCS managed permitting, procurement, construction, start up, and performance testing of the system, which came online in 2009.

Due to their full satisfaction with SCS's performance and service, UNH awarded SCS a five-year operation and maintenance (O&M) agreement, which SCS performed through regular coordination with WM and University staff.

Availability

All key SCS staff will be available for the full duration of the proposed SCWMA contract. In the unlikely event that a member of the SCS team is no longer available to work on the contract, for whatever reason, the City/LTP/SCWMA staff can rest assured that we will replace that individual with someone of equal or greater capability. We will communicate any such changes as soon as is feasible and make sure you are fully satisfied with the ongoing quality of our Team's services at all times.

Licenses and Certifications

SCS possesses all needed licenses and certifications to complete the full scope of EPC services required for this project. SCS is a licensed General "A" Haz contractor (License No. 749678 A HAZ), providing design-build-operate services throughout the U.S.

The Professional Engineers on our team are licensed by the State of California.

All SCS field staff are Hazardous Waste Operations Emergency Response (HAZWOPER) trained, and undergo annual refresher training. Many SCS technicians also have specialty certifications such as fusion-tech certification, confined-space entry certification, and responsible person certification for trenching and excavation.

All SCS team members are fully trained in health and safety and complete monthly refresher training modules.

Similar Project Examples/References

Since 1976, SCS has completed approximately 350 composting, organics, and biogas projects, including approximately 60 in California.

SCS has many contracts to manage composting operations, and has significant recent and relevant experience collaborating with vendors that provide CASP composting

systems that include an engineered membrane fabric cover, as well as other types of composting systems.

SCS has also completed a number of biosolids projects since 2000, including at wastewater treatment plants.


In 2010, the largest waste collection company in the U.S. chose SCS to develop a comprehensive report on organics regulations in California, 10 other U.S. states, and Canada.

SCS owns its own composting equipment, including a windrow machine, mix truck, and miscellaneous related equipment for our compost facility operations practice.

SCS's design-build projects are too numerous to list, but significant projects include: biogas-to-energy; transfer stations; landfill cell closures; hazardous substance remediation; facility decontamination and demobilization; storm water controls; impoundments; and a host of other waste industry projects.

The below project description illustrates SCS's qualifications to fulfil the role of EPC contractor on this project.

DESIGN, PERMITTING, AND CONSTRUCTION OF DIGESTER GAS SYSTEM, Fresno/Clovis Wastewater Treatment Facility, Fresno, CA

Client	City of Fresno 5607 West Jensen Ave. Fresno, CA 93706	
Contact	Kevin Norgaard Project Manager 559-478-5287 knorgaard@mkassociates.us (Kevin left the City recently. Above is current contact info)	
Dates	2010-2012; 2012-Present	
Budget	\$7.6 Million	
SCS Staff	Bob Viers, EPC Manager; Steve Hamilton, O&M Manager	

Background

In 2010, the City of Fresno retained SCS to design, permit, and construct a Digester Gas Conditioning System (DGCS) at the Fresno/Clovis Wastewater Treatment Facility in Fresno, CA. The DGCS converts DG into biomethane. The DG at the Fresno facility is almost identical to the DG to be produced at the proposed facility, in that it has a high carbon dioxide fraction, is saturated with moisture, and contains H₂S. The biomethane is used to fuel on-site combustion

turbines. The biomethane plant has an inlet capacity of 1,500 scfm and a product gas capacity of 1,100 mmBtu/day. The biomethane plant incorporates the following technologies:

- DG refrigeration.
- DG compression.
- SulfaTreat for H₂S removal.
- Membranes for CO₂ removal.
- TOX.

SCS executed the project under a design/build contract. SCS's scope included:

- Process design, facility layout, mechanical design, electrical design, civil design, and structural design.
- Civil, structural, mechanical, and electrical construction/installation services.
- Startup and commissioning services.
- Operator training.
- SCADA and PLC system design, supply, and integration.

SCS is currently providing on-going facility maintenance under a long-term O&M agreement.

Challenges

- The biomethane plant was required to meet Pacific Gas & Electric Company (PG&E) pipeline quality gas standards, even though the product gas was not delivered into a pipeline, because the combustion turbines were equipped with selective catalytic combustion.
- SCS was also responsible for securing the air permit for the project.
- It was understood by SCS and the City that the 10-month schedule (RFP requirement) was unreasonable given the equipment delivery timeframe. SCS creatively solved this issue by allowing for the payment of liquidated damages in our project budget.

Outcomes and Benefits

- The project began commercial operations in April 2012 (16 months).
- The original contract price was \$7,600,000. Change orders totaled \$26,000 (+0.4 percent).
- SCS has provided maintenance services for the facility since start-up.
- From commissioning through March 2016, the plant uptime has been 98 percent, with the exception of six weeks of downtime due to a main compressor failure in 2014. The City determined not to purchase a spare compressor, which would have reduced the downtime significantly. In March 2016 the gas turbines that were fueled by the biomethane failed. (SCS did not design, construct, or maintain the turbines, only the digester gas supply system.) The City elected not to replace the turbines.
- The City of Fresno recently engaged SCS to design a product gas compressor pipeline extension to allow injection of the biomethane into PG&E's natural gas distribution pipeline.

A representative sampling of client evaluations, a list of SCS's organic materials management services, a list of ongoing and recent composting projects, and a brief overview of SCS is provided in **Appendix F**.

Our Team references are provided in Table 4 on Page 54.

Subconsultants

Engineered Compost Systems (ECS)

Founded in 1999, ECS's nine-person team has provided comprehensive process design and technical consulting services to over 80 compost operations facilities in North America (including in California), Europe, Australia, and New Zealand; and has provided compost systems, technology and on-going technical support to over 50 client-owned composting facilities.


ECS has 58 facilities operating around the world, each with a unique assemblage of compost technologies from the ECS Toolkit, chosen to address each client's unique set of needs. Combined, these facilities currently process over 1,250,000 tons of biosolids, food waste, yard waste, and municipal solid waste every year. *Odor issues at these facilities are rare.*



The primary reason we chose ECS as our composting technology provider is their modular approach to composting system design and their full-service technical support for all aspects of planning, permitting, designing, evaluating and analyzing a compost facility and its processes.

An ECS Selected CASP Project List is provided below in Table 3.

Table 3. ECS CASP Project List

 engineeredCOMPOSTsystems					
Selected ECS CASP Project List					
CA Facilities					
Year	Composting Technology	Feedstocks	Ton/Year	State	City
2016	Building Biofilter	FW/YW	na	CA	Napa
2012	ASP upgrade	SSO	300,000	CA	Bay Area
2015	Controls Upgrade	Biosolids	200,000	CA	South Kern
2009	CASP	SSO	100,000	CA	Dixon
2012	Agitated Bed & ASP	SSO/YW	41,000	CA	Oceanside
2006	In-Vessel & ASP	MSW	18,200	CA	Mariposa
2010	CASP	SSO/YW	5,500	CA	Zamora
2010	CASP	SSO/YW	1,900	CA	Agua Mansa
2006/2010	ASP	Biosolids	95,000	BC	Kelowna
2017	ASP	SSO	20,000	BC	Victoria
2015	ASP	Contaminated Soil	42,000	CO	Garfield County
2011	ASP	SSO/YW	30,000	FL	Vista
2011	ASP	SSO/YW	27,000	FL	Okeechobee
2016	ASP	SSO	39,000	MD	Howard County
2010	ASP	Biosolids	27,300	MO	St Peters
2010	ASP	Biosolids	13,700	MO	Sedalia
2007	Agitated Bed & ASP	SSO/YW	110,000	WA	Tenino
2010	ASP	Biosolids/SSO/YW	101,000	WA	Spokane
2012	Controls Upgrade	YW	70,000	WA	Puyallup
2008	ASP	SSO/YW	27,300	WA	Stanwood
2004	ASP	Biosolids	5,500	WA	Arlington
2013	ASP (upgrade)	Biosolids	4,000	WA	Lynden
2009	ASP	Biosolids	1,900	WA	Everett
Total Tons/year			1,378,410		

Because ECS technology plays such a fundamental role in our solution, we have provided three client references for ECS below. Each client has installed the CASP composting system we are proposing for SCWMA. You are welcome to contact these clients to seek feedback on how the technology is working, as you desire.

Agromin (Chino and Oxnard), SSO LA area
 Dave Green
 805-485-9200
dgreen@agromin.com

Lenz Enterprises, Stanwood WA, SSO from Seattle
Jason Lenz, Vice President
360-629-2933
jason@lenz-enterprises.com

City of Kelowna, BC, Biosolids Compost
Gordon Light, Supervisor
250-469-8795
glight@kelowna.ca

ECS services on the project will be directed by Tim O'Neil, president of ECS. Tim's biography is provided in **Appendix E**.

Wiemeyer Ecological Sciences

Wiemeyer Ecological sciences will assist Renewable Sonoma by collaborating with SCWMA's and the City of Santa Rosa's endangered species specialists to accomplish mitigation requirements as expeditiously as possible. A former SCS employee in SCS's Santa Rosa office, Darren Wiemeyer has owned his own consulting practice since 2007.

Darren has performed wetland delineations and assessments on over 50 sites in Sonoma County and other regions of northern California, including for several wetland mitigation bank and conservation bank sites in Sonoma County. The majority of these projects have been performed for commercial and residential developments for both small property owners and large housing development companies, as well as agricultural developments in Sonoma County.

A few notable projects include:

- Occidental Road Mitigation Bank, Santa Rosa, CA.
- Sonoma County Oakmont Sewer Line Extension Project, Santa Rosa, CA.
- Sonoma County Todd Road Sewer Trunk Project; Drumright Subdivision in Healdsburg, CA; Bellevue School District, Santa Rosa, CA.

Darren has also completed many similar projects as a sub-contractor for SCS Engineers or during his career with SCS, including in the local area:

- Sonoma Family Homes in Healdsburg, CA.
- Sanders site in Santa Rosa, CA.

He has also performed wetland and riparian monitoring and reporting on several mitigation and restoration sites in Sonoma County, which include biological evaluation of wetland and riparian habitats and ecological processes, quantification of plant species abundance and diversity, evaluation of biological success criteria, and preparation of reports for regulatory agencies.

A few notable projects include:

- Oakmont Park Village (Riparian Mitigation Project), Santa Rosa, CA
- Occidental Road Mitigation Bank (Valdez Riparian Mitigation Project), Windsor, CA.
- Vintana Subdivision (Wetland and Riparian Mitigation Project), Windsor, CA.

Darren's resume is included in **Appendix E**.

Craig Communications

Founded in 2000, Craig Communications is a small, woman-owned business that has successfully designed and implemented over 300 community relations programs for complex, often controversial environmental redevelopment projects with multiple stakeholders. About 90 percent of their work involves supporting clients with environmentally sensitive projects.

Just a few of Craig Communications many successful community engagement projects in northern California are noted below:

- Community outreach in Santa Rosa involving stakeholders in technical projects, including a \$30 million multi-year remediation project in downtown Santa Rosa.
- Successfully managed outreach to gain acceptance for a biosolids-to-energy pilot project for Contra Costa Sanitary for facilities in Richmond and Antioch, California.
- Outreach for urban farm, green recycling, and water reclamation programs in North Richmond to teach area residents and school children about farming, recycling, and nature.
- Designed and executed an outreach program for Republic Services to increase understanding of the importance of recycling and participation in recycling programs within low-income, diverse communities.

Craig Communications' founder and Principal, Tracy Craig, will lead community engagement support services as needed. A former 10-year employee of the Department of Toxic Substances Control (DTSC), Tracy maintains strong relationships with many environmental regulatory agencies responsible for remediation and redevelopment in northern California. Tracy's resume is provided in **Appendix E**.

Matthew Cotton, Integrated Waste Management Consulting, LLC

Matthew Cotton has worked in organics and solid waste management since 1986. He has served as a consultant, educator, researcher, and advocate for new and expanded organics recycling and composting programs, including permitting and assisting in the development of some of the major composting facilities in California.

In 1993, Matthew was appointed to the California Integrated Waste Management Board's (now CalRecycle) Compost Advisory Panel to participate in the development of the state's composting regulations, and has participated in each subsequent iteration of the regulations since that time. He lectures widely and is the author of a number of articles on the organic

waste industry. He has taught classes on composting program design and system implementation at San Francisco State University and the University of California Extension, and is a paid instructor of the Solid Waste Association of North America (SWANA)'s Manager of Composting Programs certification course, SWANA's newest training course on Organics Collection, the Foundations of Composting Course for the US Composting Council (USCC), and the Introduction to Organics class for the California Resource Recovery Association (CRRA). He recently completed three consecutive terms as President of the Board of Directors of the USCC, where he has served for over a decade, and has performed considerable work at the state level.

In the last decade he has completed several major projects for CalRecycle: including the statewide [Survey and Analysis of Composting Industry Best Management Practices and Market Conditions](#); participating in the [Technologies and Management Practices Reducing Greenhouse Gas Emissions from Landfills](#), and the Life Cycle Assessment of Organic Diversion Alternatives and Economic Analysis of Greenhouse Gas Reduction Options. He participated as subcontractor to ESA on the [Statewide Programmatic EIR for Anaerobic Digestion Facilities](#), and to SAIC for the [Baseline Infrastructure Inventory and Information Framework](#).

Odor is perhaps the Achilles' heel of the Composting Industry and IWMC has been involved in numerous activities to help alleviate this problem. IWMC was involved in crafting California's Odor Impact Minimization Plan (OIMP) process and wrote the template plan that is on the CalRecycle website. He has written and revised over 40 OIMPs and provides hands on technical assistance to compost facility operators. He was a co-author of the [Comprehensive Compost Odor Response Project](#) funded by CalRecycle.

Renewable-Sonoma will apply Matthew's in-depth expertise and talent to expediting development of our solution (particularly permitting) and to the overall quality and integrity of our operations.

Comprehensive additional information on Matthew's outstanding qualifications for this project can be viewed by clicking [here](#).

Matthew's resume is provided in **Appendix E**.

REFERENCES

Nine references are provided below. These references reflect the directly relevant capabilities of each firm that comprises Renewable Sonoma, as well as the EPC contractor, SCS Engineers/SCS Energy.

We are proud of the way we have supported each client listed, both individually and when working together as a team, and we encourage SCWMA to seek reference information, as desired.

One or more members of our Team worked on these projects and are known to these clients, as described.

Table 4. References

No.	Client	Contact Information	Team Members	Description of Services
1.	SCWMA 2300 County Center Drive, Suite B-100 Santa Rosa, CA 95403	Patrick Carter Executive Director 707-565-3687 patrick.carter@sonoma-county.org	<p>Sonoma Compost Will Bakx Alan Siegle</p> <p>reBIO Roy Alper</p> <p>SCS Engineers Leslie Lukacs, Ambrose McCready Michael O'Connor</p>	<p>1993 – 2015 Successful composting production, sales, and community education business based in Sonoma County.</p> <p>2016 to 2017 Meetings and recommendations concerning organics processing in Sonoma County</p> <p>In 2009, SCS developed a Construction and Demolition (C&D) debris ordinance, and a Venue/Events recycling ordinance for SCWMA. Leslie Lukacs, Michelle Nichols, and Michelle Leonard worked on this project.</p> <p>In 2014, SCS completed a countywide Waste Characterization Study for SCWMA. The Study was focused on the commercial sector. SCS Sr. VP and Sustainable Materials Management Practice Leader, Michelle Leonard, managed this project.</p> <p>In 2014, SCS completed "First-Flush" engineering services at the County's Central Compost Site in Petaluma, CA. Ambrose McCready and Michael O'Connor worked on this project.</p>

No.	Client	Contact Information	Team Members	Description of Services
2.	Sonoma County Sonoma County Central Disposal Site 500 Meacham Road Petaluma, CA 94952	Patrick Carter Executive Director (707) 565-3687 patrick.carter@sonoma-county.org Glenn Morelli 707-565-7947 glen.morelli@sonoma-county.org Trish Pisenti 707-565-7950 trish.pisenti@sonoma-county.org	Sonoma Compost Will Bakx Alan Siegle SCS Engineers, SCS Energy Leslie Lukacs Steve Hamilton Pat Sullivan Michael O'Connor Jonathan Meronek Ambrose McCready	1993 – 2015 Successful composting production, sales, and community education business based in Sonoma County. 1989 – 2017 SCS has completed 27 projects for Sonoma County from 1989 to 2017. The County has renewed many SCS contracts over the years. Projects include: LFG system design, construction, start-up, and expansion; LFG-to-energy transition audit; materials recovery facility design and cost estimating; landfill permitting support; LFG system O&M; Air monitoring; GHG emissions verification and reporting; Supervisory Control and Data Acquisition (SCADA) system design and installation for the County's legacy landfill sites; and other miscellaneous solid waste consulting services.
3.	West Marin County 5400 Nicasio Valley Rd Nicasio, CA 94946	Kevin Lunny Owner 415 662 9849 kevin@lunnypaving.com	Sonoma Compost Will Bakx Alan Siegle	2015 – Ongoing Optimize compost process, product development, research support, site management, education and outreach, customer service, and marketing support services.
4.	Santa Rosa Water 4300 Llano Road Santa Rosa, CA 95407	Mike Prinz Deputy Director, Subregional Operations 707-543-3357 mprinz@srcity.org	Sonoma Compost Will Bakx Alan Siegle	2017 Meetings and recommendations concerning construction of a composting and anaerobic digestion facility at the Laguna Treatment Plant (LTP)

No.	Client	Contact Information	Team Members	Description of Services
			reBio Roy Alper	2017 Meetings and recommendations concerning construction of a composting and anaerobic digestion facility at the Laguna Treatment Plant (LTP)
5.	High Plains Bioenergy 3291 Desert Rd. Guymon, OK 73942	Bill Patrick Sr. Director of Operations 816-238-7928 william.patrick@hpbioenergy.com □	BIOFerm Dina Bertolini Steven Sell Drew Witte Nadeem Afghan	2017 - Ongoing <i>See Project Profile (above).</i>
6.	City of Edmonton Site 100, Edmonton Waste Management Centre 250 Aurum Road N.E. Edmonton, Alberta T6S 1G9	Daniel Alberkant Senior Project Engineer 780-442-7091 daniel.alberkant@edmonton.ca	BIOFerm Dina Bertolini Steven Sell Drew Witte Nadeem Afghan	2016 - Ongoing <i>See Project Profile (above).</i>
7.	Central Contra Costa Solid Waste Authority 1850 Mt. Diablo Boulevard, Suite 320 Walnut Creek, CA 94596	Bart Carr Senior Program Manager 925-906-1801 bart@recyclesmart.org	SCS Engineers Leslie Lukacs (other SCS staff & subcontractors)	2016 - 2017 SCS provided food waste recycling assistance and visited 200 businesses that currently have food waste containers. SCS provided outreach materials and trainings to minimize contamination and provide clean food waste to an anaerobic digestion system at the water treatment facility.
8.	City of Fresno 5607 West Jensen Ave. Fresno, CA 93706	Kevin Norgaard Project Manager 559-478-5287 knorgaard@mknassociates.us	SCS Energy Bob Viers Steve Hamilton	2010-2012; 2012-Ongoing <i>See Project Profile (above).</i>

No.	Client	Contact Information	Team Members	Description of Services
		<i>NOTE: Kevin is no longer with the City but will provide a reference for SCS Energy. He was our primary contact with the City from 2009 to 2017.</i>		
9.	University of California Office of the President 1111 Broadway, Suite 1450 Oakland, CA 94607	Nicholas Balistreri Renewable Energy Manager 510-987-0951 nick.balistreri@ucop.edu	SCS Energy Bob Viers Steve Hamilton	2014 - 2018 Design, permitting, and construction of a LFG to renewable natural gas (RNG) facility in Shreveport, LA.

LITIGATION AND NOTICE OF VIOLATION HISTORY

Renewable Sonoma is the proposing entity. Renewable Sonoma is 100% owned by Sonoma Compost. Renewable Sonoma associate companies, reBIO and BIOFerm, will work closely with Sonoma Compost to develop and deliver our Team's solution. Therefore, we have provided a full and complete response from all three firms to the detailed litigation question on Pages 34-35 of the RFP (Lines 971 to 1006).

We have, in good faith, provided what we believe is a complete response. However, if clarification or additional information is needed, we would be pleased to provide additional information upon request.

reBIO and BIOFerm

Renewable Sonoma associate companies, **reBIO and BIOFerm**, and its principals, have:

- **Zero** instances of claims, settlements, arbitrations, or litigation proceedings for \$100,000 or more in the past 5 years.
- **Zero** instances of pending or threatened litigation in California.
- **Zero** Notices of Violation (NOV) or enforcement actions against it by a regulatory SCWMA in the past 5 years.
- **Zero** permit, franchise, license, or entitlements revoked or suspended in the last 5 years.
- **Zero** instances of liquidated damages, administrative fines, charges, or assessments for \$50,000 or more in one calendar year in the past 5 years.
- **Zero** claims against a bid, proposal, or performance bond, and zero contractual defaults or terminations in the last 15 years.

Sonoma Compost

SCWMA contracted with Sonoma Compost to provide composting services to residents, business owners, and farmers throughout Sonoma County from 1993 to October 2015. SCWMA's most recent agreement with Sonoma Compost to operate at the Central Disposal Site was pursuant to the Organic Materials Processing, Composting, and Marketing Services Agreement, dated February 20, 2013.

Sonoma Compost and its principals have:

- **1** instance of a claim, settlement, arbitration, or litigation proceeding for \$100,000 or more in the past 5 years.
- **Zero** instances of pending or threatened litigation in California.
- **13** Notice of Violation (NOV) or enforcement actions against it by a regulatory SCWMA in the past 5 years.

- **Zero** permit, franchise, license, or entitlements revoked or suspended in the last 5 years.
- **Zero** instances of liquidated damages, administrative fines, charges, or assessments for \$50,000 or more in one calendar year in the past 5 years.
- **Zero** claims against a bid, proposal, or performance bond, and **one** contractual default or termination in the last 15 years.

Litigation

SCWMA and Sonoma Compost were named as Co-Defendants, along with the County of Sonoma, in a lawsuit filed on August 21, 2014, by Plaintiff Renewed Efforts of Neighbors Against Landfill Expansion ("RENALE") under the Federal Water Pollution Control Act. Case # 14-cv03804 The U.S. District Court for Northern District of California.

The Lawsuit was settled and dismissed against all parties as of September 23, 2015. SCWMA agreed to cease all composting activities at the Central Disposal Site, terminate the Services Agreement with Sonoma Compost, and remove Sonoma Compost from the Central Disposal Site. Sonoma Compost agreed to cease accepting new material for composting activity and surrender to SCWMA possession of the Central Disposal Site. Sonoma Compost thereafter settled with the SCWMA and RENALE. All settlements were without assignment or admission of liability or fault and were deemed by all the Defendants to be in their best interest.

Notice of Violations (NOV)

Details concerning each NOV are provided in **Appendix G**.

Lessons Learned

The entire experience surrounding the NOVs, the litigation and the eventual closure of Sonoma Compost is the strongest argument for ensuring the Agreement between SCWMA and Renewable Sonoma accommodates adapting to changing technology and conditions.

Sonoma Compost's Open Windrow composting technology was state of the art when the company opened in 1993. The technology, coupled with the sophistication of the company's principals, allowed Sonoma Compost to develop a wide range of compost and mulch products that served multiple diverse markets in Sonoma County for over two decades. At the time of its closure in 2015, Sonoma Compost had become the preeminent compost producer in the region and Sonoma Compost's founders, Will Bakx and Alana Siegle, had emerged as two of the most respected voices in composting practices and soil health in the State of California.

Given this, why was Sonoma Compost closed? Setting aside the insistence of a group of neighbors, the reality is that the Open Windrow composting technology had become obsolete by the second decade of the 21st Century. While improvements could have been made to prevent water discharge and further reduce odors, it did not make economic sense to make these capital improvements to an obsolete technology. New composting technologies had become available that could reliably control odors and emissions and

operate with Zero Discharge of water. The Renewable Sonoma Team, and Sonoma Compost in particular, are excited to propose the best of these technologies to SCWMA as the foundation of our solution.

As we learned with Open Windrow technology, however, state-of-the-art technologies we propose today may not be the very best available 20, 15, or even 10 years from now. Technology is advancing at an unprecedented pace. Demands are ever increasing that large industrial facilities reduce their impact on the environment. It is not exaggeration to assert that the direction and speed of these changes are inevitable. What none of us can know today, however, is what the next big change may be or when it may emerge. To Renewable Sonoma, these rapidly changing conditions are not problems; they are opportunities for continuing improvement.

And so, it is imperative to allow for this adaption in the language included in the Agreement governing this project. Accordingly, this is one of our proposed changes to the terms of the Draft Agreement, all of which are provided in Section 6. Service Exceptions/Alternatives.

3. STATEMENT OF FINANCIAL QUALIFICATIONS

Renewable Sonoma has spent considerable time and effort since 2015 understanding the County's needs regarding disposed organic materials and how best to meet them. In 2016 we identified available land near the LTP as the ideal site for our facility. We initiated discussions with LTP management and, over time, identified tremendous synergistic use opportunities that could be achieved at that location. We have assembled a well-rounded, experienced and predominantly local team to consider a range of options before settling on our proposed solution. We have evaluated both costs and benefits of different configurations and have looked for the best balance to achieve maximum benefits at a reasonable cost.

In recent months, we have worked diligently to identify the costs associated with executing each step in each phase of the project, and to secure the financial and operational resources necessary to ensure project success. We also established a new company, Renewable Sonoma, as the proposing entity for this project. Upon award, Renewable Sonoma and its owners will sign and commit to the Cornerstone Agreements governing the project.

At the time of the mandatory Pre-Proposal Conference on June 28, 2017, Sonoma Compost, reBIO and BIOFerm were anticipated to take ownership positions in Renewable Sonoma. We have since decided that Renewable Sonoma will be 100% owned by Sonoma Compost, a long-established and well-regarded local firm owned in equal parts by Will Bakx and Alan Siegle. reBIO and BIOFerm will remain associate companies of Renewable Sonoma and have an option to invest in and take an ownership stake in Renewable Sonoma at a future date.

PROJECT COSTS

After extensive review and consideration of many options and the costs of each, we have concluded the estimated total project cost of the solution we are proposing will be \$ **redacted**, including all costs of development, construction, equipment, environmental mitigation, financing fees, interest during construction and working capital.

FINANCING PLAN

The recently passed law making many changes to business and personal taxes includes several provisions that directly affect investments and lending to major capital projects such as this project. The law is just a few weeks old at the time this proposal is being submitted and the changes are too significant to fully evaluate how they may affect Renewable Sonoma's financing plan. The general sense, however, is that the changes appear most likely to have a positive impact and may create new financial structures that may benefit the project.

Renewable Sonoma's capital resources are broken out as follows:

Senior Debt	75%	\$ redacted
Construction Debt	22%	\$ redacted*
Owner Equity	3%	\$ redacted
TOTAL		\$ redacted
At Commercial Operation:		
Third-Party Equity		\$ redacted
Construction Debt payoff		(\$ redacted)

Renewable Sonoma is also pursuing an alternative financing plan that may be significantly enhanced by the new tax law, but cannot be settled until a more detailed analysis of the new law has been completed. That alternative would have a single party, such as a pension fund or insurance company, and could potentially provide both debt and equity to the project in addition to the Owner Equity.

Senior Debt

Senior Debt will be funded by the California Pollution Control Financing Authority (“CPCFA”). The CPCFA will fund 75% of eligible project costs; virtually the entire Renewable Sonoma Project is eligible for CPCFA financing.

Arranging CPCFA funding is a two-step process. The initial step is CPCFA’s adoption of an Initial Resolution stating what elements of the Project are eligible for CPCFA financing. Renewable Sonoma submitted an application for an Initial Resolution on August 18, 2017; CPCFA approved the Initial Resolution at its regular meeting on September 18, 2017. A certified copy of the Initial Resolution is also attached in **Appendix H**.

The second step is CPCFA’s adoption of a Final Resolution. CPCFA will accept an application for a Final Resolution after the project has received all Discretionary Approvals, the EPC Contract with Guaranteed Maximum Price has been signed, and Final Design is nearing completion. The term of the CPCFA funding is planned to be 15 years after commercial operation, which will allow the senior debt to be fully repaid with 5 years remaining in the initial terms of the Cornerstone Agreements with SCWMA and LTP.

At the time Renewable Sonoma applied for an Initial Resolution, the estimated Total Project Cost of the project was approximately \$ redacted. The Initial Resolution concluded that all costs of the project were eligible for CPCFA financing and approved 75% of those costs, an amount of \$ redacted, for CPCFA financing.

It is typical that the cost of a project is not fully developed at the time CPCFA acts on an Initial Resolution. At this early stage of a project, major agreements have not yet been executed, environmental and land use approvals are yet to be applied for and detailed engineering is yet to be started. When an applicant applies for a Final Resolution, after these project milestones have been reached, it is expected that costs will be different.

Thus, the importance of the Initial Resolution is the CPCFA's finding that the project is eligible for CPCFA financing, in this case for the entire project, and the determination that CPCFA will finance 75% of the Total Project Cost as it becomes known at the time of the Final Resolution.

Construction Debt

CPCFA financing is structured to commence as soon as 25% of Total Project Costs have been expended by equity or subordinated debt. This is typically in the early stages of project procurement and construction.

Because the Construction Debt will be subordinate to CPCFA debt, the amount of Construction Debt required is considerably less than the total cost of construction. For the Renewable Sonoma project, the requisite amount of Construction Debt (\$ redacted) is the difference between the Total Project Cost (\$ redacted) and the sum of 75% of Total Project Cost (\$ redacted) and Owner Equity (\$ redacted). BIOFerm is the committed source of Construction Debt, in the approximate amount of \$ redacted. A Letter of Intent from BIOFerm is also attached in **Appendix H**.

Interest will accrue on the Construction Debt until the payoff date. The Construction Debt will have a term of 27 months.

Third Party Equity

Construction Debt will be taken out at commercial operation by Third Party Equity. Renewable Sonoma has arranged for Third Party Equity to be provided by the Full Cycle Energy Fund, a California private equity fund focused exclusively on beneficially re-using disposed organic materials to produce energy. A Letter of Intent from Full Cycle Energy is also attached in **Appendix H**.

Owner Equity

Sonoma Compost has committed \$ redacted in Owner Equity to the project, which the owners of Sonoma Compost have available from their own resources and committed investors. reBio and BIOFerm have an option to invest part of the \$ redacted of Owner Equity and become members in Renewable Sonoma.

Possible Grant Funds

Renewable Sonoma intends to apply for a CalRecycle grant in 2019 or 2020 as part of that agency's regular annual funding cycle to support composting and anaerobic digestion projects. CalRecycle has been awarding such grants in amounts of a few million dollars per project but totaling over \$20 million per year for several years and is expected to continue doing so. We do not, however, include such a grant in our current financing plan because there is no assurance at the time of this proposal that the project would be receive a CalRecycle grant.

Schedule

- Owner Equity will be funded upon SCWMA's selection of Renewable Sonoma's project and will fund early stage pre-construction development costs.
- Construction Debt will be funded before the issuance of Notice to Proceed on construction and will fund the later stages of development costs and early stages of equipment procurement and construction.
- CPCFA bonds will be sold early in the construction schedule and the funds will become available during construction as soon as Construction Debt and Owner Equity equaling 25% of Total Project Cost has been fully expended on eligible Project costs. CPCFA funds will fund the balance of construction and commissioning of the Project.
- Third Party Equity will replace the Construction Debt in the capital stack after the Project commences commercial operation. Third Party Equity funds will fully repay the Construction Debt principal and accrued interest at that time (the payoff date).

Adequacy to Complete Project

Prior to start of construction, Renewable Sonoma's EPC contractor, SCS Engineers, will provide our lenders and investors with a Guaranteed Maximum Price (GMP) and Performance Guarantee to meet certain standards for at least one year after commercial operation. That guarantee will be backed by SCS' financial strength. Renewable Sonoma will make SCWMA a beneficiary of this guarantee and its underlying financial support by SCS.

SUPPORTING FINANCIAL DOCUMENTS

In addition to the financial documents noted above, additional financial documents are required to be submitted with our proposal. A full list of all of the financial documents included in **Appendix H** is provided below. Documents are provided in the order shown:

- 1. Certified Copy of Initial Resolution – CPCFA**
- 2. Letter of Intent – BIOFerm**
- 3. Letter of Support – BIOFerm's Bank**
- 4. Letter of Intent – Full Cycle Energy**
- 5. Letter of Support – Sonoma Compost's Bank**
- 6. Three years of business tax returns and all supporting schedules for Sonoma Compost (2013, 2014, and 2015).**

NOTE: Due to the closure of Sonoma Compost in late-2015, 2016 returns do not reflect customary revenues and expenses for their successful composting business and are, therefore, not provided. (Sonoma Compost does not have audited financial statements.)

7. **Letter of Intent - SCS Engineers** signed by Chief Financial Officer, Curtis Jang, confirming SCS's intention to manage cash flows during construction as draw requests are submitted.
8. **Letter of Support from SCS's Bank** confirming SCS is in good standing and has an irrevocable line of credit in the amount of \$25,000,000.
9. **SCS's 2016 and 2015 Audited Financial Statements.** SCS Engineers balance sheet will back the construction and commissioning of the project, including meeting performance standards designated in the EPC Contract.

NOTE: SCS's working capital and credit facilities are more than sufficient to cover all project design-build costs, equipment costs, start-up costs, and required payments to SCWMA (if any), for 3 months (or longer, if mutually agreed).

NOTE: ALL DOCUMENTS INCLUDED IN APPENDIX H ARE STRICTLY CONFIDENTIAL and are provided for the express purpose of evaluating our team's financial qualifications for this project. No part of any document should be shared with anyone for any other reason without the express written consent of Renewable Sonoma and SCS Engineers.

4. TECHNICAL PROPOSAL

WHY RENEWABLE SONOMA?

Before elaborating on the details of our Technical Proposal, it is important to state the key drivers that have guided our approach to all aspects of the project:

- The global imperative to reduce greenhouse gas (GHG) emissions requires that the maximum amount of discarded organic material be diverted from landfills, where their decomposition produces the intense GHG: methane.
- There is very strong public support in California, and particularly in Sonoma County, for actions that reduce GHG emissions. This support has manifested itself in many ways, including increasingly restrictive state limitations on landfilling organics. Of its own volition, Sonoma County has adopted a goal to divert 80% of materials from landfills.
- Recognizing that project approvals in California can be inordinately time-consuming, the state has adopted legislation and regulations, as well as baseline data, to accelerate the approval of anaerobic digestion and composting projects so we can begin reducing GHG emissions as quickly as possible.
- Technology is changing at an increasingly rapid pace and is affecting every aspect of life. There is a need for flexibility in arrangements so the inevitable changes that may affect the project can be incorporated in a mutually beneficial way.
- There is strong demand in Sonoma County for composting operations to be restored in the county, and for compost operators who are part of the local residential, commercial and agricultural communities, who both understand and have a long track record of meeting local market needs.
- There is strong local support for sustainable development which maximizes the beneficial re-use of discarded materials and has the lowest possible carbon footprint.

These drivers have guided Renewable Sonoma in offering our Technical Proposal, our Permitting Plan and our proposed alternative language in parts of the Agreement.

We propose a project that is sited at and integrated with the Laguna Treatment Plant (LTP). This creates the numerous Synergistic Use Opportunities discussed on Pages 90 to 92, maximizes the beneficial re-use of discarded organics, improves LTP's pioneering Microgrid project under development, and does all this while reducing GHG emissions.

We propose a project that uses proven technologies for compost operations and anaerobic digestion that are considered state-of-the-art at this time. Each of these technologies have many operating systems in the U.S. and globally. We also suggest that contract terms be

adaptable to accommodate changes that may occur, whether in technology or demands for further GHG reductions or factors that cannot be imagined, let alone foreseen, today.

We propose a Permitting Plan that assumes the designated lead agency is highly motivated to meet landfill diversion mandates and local goals with an environmentally sensitive project. The Plan starts with our commitment to submit thorough applications and engage in extensive community outreach, which we have already begun. We assume that state agencies with jurisdiction over the project will abide by the Permit Streamlining Act and more recent state legislation, regulations, and supporting documentation to accelerate the approval of anaerobic digestion and composting projects, so we can begin to reduce GHG emissions as quickly as possible.

We acknowledge that Sonoma County jurisdictions have to meet both state mandates and local goals for diverting organic materials from landfills. To help SCWMA and its member agencies meet these requirements, we propose a broad, on-going Community Engagement Program (see **Appendix I**) to rapidly reduce the amount of residential and commercial organic materials being landfilled, including food scraps. This program will be undertaken in cooperation with the SCWMA, its member agencies, and haulers to engage the entire Sonoma County community. Our budget includes funding for this program, which would commence as soon as an Agreement is signed.

Finally, Renewable Sonoma has sized the project so we can accept and process the increased volume of organics that will be diverted from landfills and delivered to the project when the state mandates and local goals are met. In return, we ask that SCWMA and its member agencies take necessary measures to assure that all these organic materials are delivered to the project to be digested and/or composted.

A. FACILITY

Term

Renewable Sonoma proposes a **20-year base term** with two (2) extension options of five (5) years each. The expenses associated with a facility that meets air and water quality requirements, high quality processing, and the mitigation of the California Tiger Salamander demand a long-term project to make it financially feasible.

Site

The facility will be located on **13 acres owned by the City of Santa Rosa (City) adjacent to the Laguna Treatment Plant**, north of Meadow Lane, between Llano Rd and Walker Rd. (See letter of Intent from the City of Santa Rosa in **Appendix C**). Our solution will be built on the following City Parcels: 134-231-14; 134-231-15; 134-231-24; 134-231-20; and 134-231-21.

These parcels should be sufficient to accommodate all buildings and equipment, including:

- Scale and primary load-check.

- Receiving, sorting and grinding areas.
- Biofilter.
- Anaerobic digesters.
- Biogas conditioning.
- CASP composting site - primary phase (active composting).
- CASP composting site - secondary phase (pathogen reduction and curing).
- Pre-screened storage area.
- Screening and finished compost storage area.
- Retail bunkers and office space.
- Storm water pond.

We have expressed to the City our interest in exploring the lease of alternative parcels of land within the footprint of the Laguna Treatment Plant and its existing biosolids composting facility. In this option, Renewable Sonoma would make needed capital improvements to the existing LTP compost facility, and would assume management of its operations. This proposal, which we informed the City is our “Preferred Option,” provides significantly greater Synergistic Use Opportunities for the LTP and can significantly reduce CTS mitigation costs. This Preferred Option, therefore, creates the opportunity to reduce the tipping fee, without compromising the quality and comprehensiveness of our solution. The City has expressed an interest in considering this option, but only if the Renewable Sonoma proposal is selected by SCWMA.

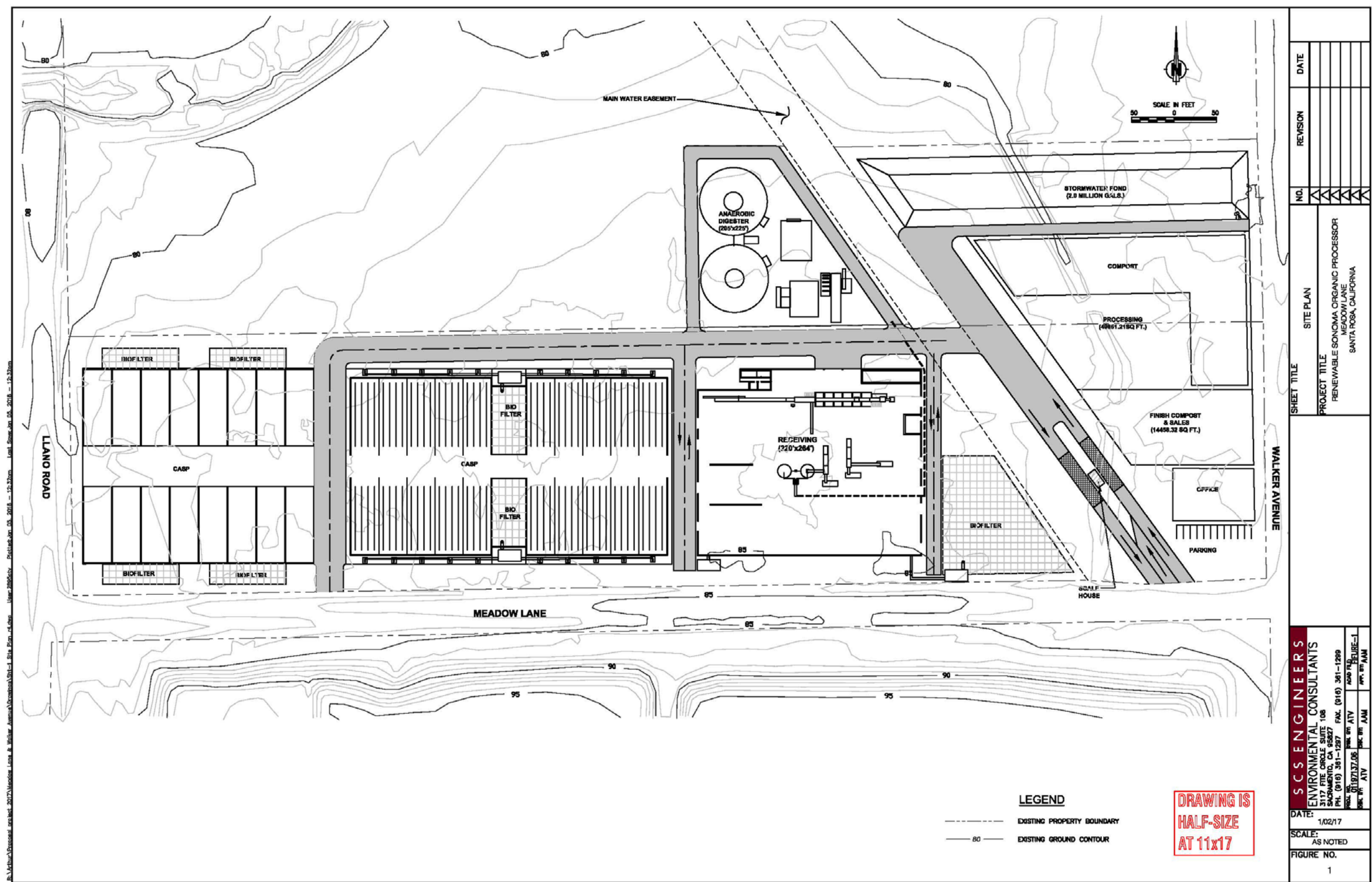
Name and Owner

Renewable Sonoma will own and manage the facility. The name of the facility will be mutually agreed to with SCWMA.

Site Plan Diagram

Our proposed Site Plan is illustrated below in Figure 4.

Figure 4. Site Plan



Technology

The Renewable Sonoma Team proposes to design and build a covered aerated static pile (CASP) composting system and an anaerobic digestion (AD) system.

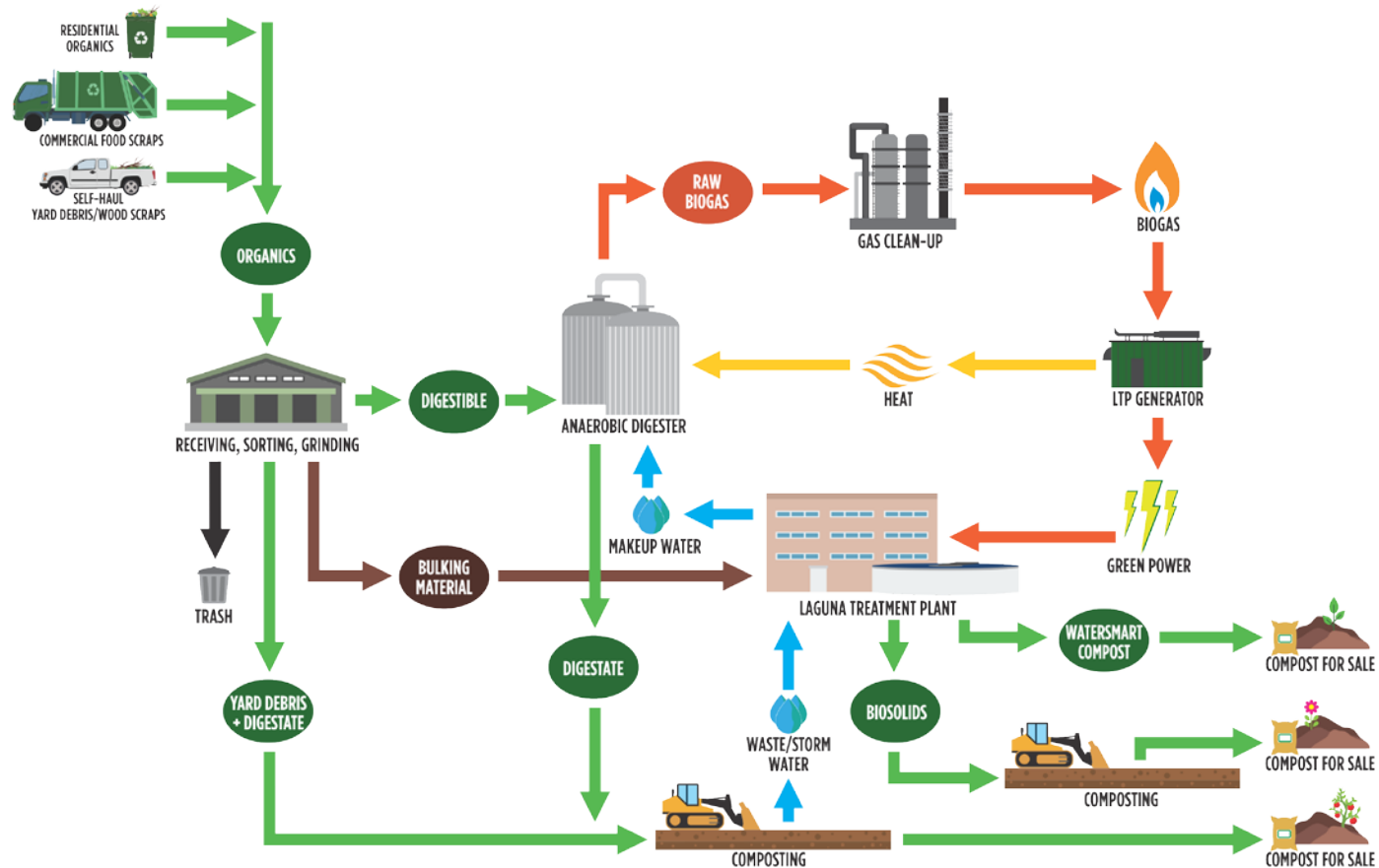
This will require the design-build-operation of four primary functional areas:

1. Materials Receiving and Separation Facility.
2. Composting Facility.
3. Anaerobic Digestion and Biogas Conditioning Facility.
4. Product Sales Building and Yard

Project Flow Diagram

A project flow diagram is provided below in Figure 5.

Figure 5. Project Flow Diagram



Project Flow Diagram



The four primary functional areas, including process and operations management for each, are described below.

Materials Receiving & Separation Facility

Incoming Feedstock

The volume and characteristics of incoming feedstock to the Renewable Sonoma facility will ultimately be determined by the commitments made by SCWMA and its constituent agencies. While we recognize that SCWMA itself has no control over commercial food scraps and self-haul materials, these materials are an important source of organic materials and have been given appropriate consideration in our solution. In Section 6, Service Exceptions/ Alternatives, we indicate the importance of SCWMA's member agencies exercising their authority to direct commercial food scraps be delivered to the Renewable Sonoma facility. We also describe the assumptions we have made regarding the volumes and characterization of incoming feedstock.

For the purposes of this Proposal, Renewable Sonoma assumes the following mix of feedstocks:

FEEDSTOCK SOURCES	
Source	Quantity (tonnes per year)
Residential green can with food scraps	66,000
Commercial food scraps now landfilled (75%)	21,000
Residential food scraps now landfilled (75%)	14,000
Self-Haul yard debris and wood scraps	15,000
Agricultural wastes (e.g. horse manure)	5,000
Total	121,000

Adaptability to Accept Increasing Volumes

The Renewable Sonoma Solution is designed to process **121,000 tons per year (tpy) of organic materials, which includes 75% of residential and commercial food scraps that SCWMA estimates are currently being landfilled.** In addition, we have sized the facility to accommodate a growth in organics deliveries of at least 10,000 tpy. As discussed elsewhere in this proposal, we have intentionally oversized the facility to accept volumes of organics that are currently being landfilled but that SCWMA and its member agencies both need to and want to divert from landfills. Further, we are open to discussing with SCWMA whether and how to plan to accommodate increasing volumes over the life of the project.

Acceptable Materials

Renewable Sonoma will accept wood waste, green waste, mixed organic material, commercial food scraps, manure free of persistent herbicides and other organic materials such as biosolids. Other materials will be evaluated on a case by case basis.

Renewable Sonoma will NOT accept compostable plastics, food related paper products with fluorinated compounds, cardboard, plastic, glass, metal, pressure-treated wood, soil, rock, brick, toxins, hazardous materials. Renewable Sonoma is open to discussion on some of the compostables listed here as non-acceptable.

Our emphasis will be on producing high quality composting and mulch products, and maximizing diversion.

Quality Control & Customer Communication

A successful organics processing business depends on a rigorous and comprehensive quality control program. This begins at the source, where organic materials are discarded. While we cannot control how things are discarded or how they may be delivered, our solution includes an extensive **Community Engagement Program** (see **Appendix I**), which is a vital part of our approach to this project. Suffice to say, we will strive diligently to reduce contamination levels in materials delivered. We realize this will take time, dedication, and significant effort, not least of which is educating the community as to the importance and positive consequences of careful separation at source (see **Contaminant and Hazardous Waste Management Protocols** provided in **Appendix J**).

Load Check Process

To assure high quality, clean processing, the first load check will take place at the incoming gate. A camera system will be installed to facilitate load inspections and serve as a safety protection for the attendant on duty, so the attendant will not have to climb on trucks.

- Loads that are grossly contaminated will be rejected and the contamination protocol will be followed.
- Partially contaminated but acceptable loads will be marked for special handling on the tag. The floor attendant on duty in the receiving building will be alerted by radio of a problem load coming in.

Once a vehicle is weighed and load-checked, a tag will be issued and the driver directed to move to the separation and processing building to tip the load in the appropriate zone.

There will be four separate drop-off bays:

1. Green can and transfer station yard debris, with food scraps.
2. Commercial food discards.
3. Self-haul yard debris.
4. Wood scraps.

This separation is essential for processing each category of materials to its highest and best use. All loads will be visually scanned for contamination as they are tipped. The trained floor attendant will direct loads that appear to have greater than 5% contamination to a dedicated location within the receiving area for closer inspection. The hauler will have a choice of taking the load to landfill or having it processed at the compost facility for an additional fee. Loads redirected for contamination may not meet the maximum of 30-minute turnaround time.

We will courteously explain to haulers and customers why loads have to be rejected and how to correct excessive contamination problems. Staff training on exactly how to communicate with customers in these situations and what materials to provide them with, will be mutually agreed to with SCWMA, County haulers, and possibly other third parties. The overriding objective in these communications will be to ensure haulers and customers do not become discouraged or dissatisfied and that they fully understand how to deliver uncontaminated loads. We are considering incentive programs to encourage delivery of cleaner loads, for example, a monthly cash award to the “Driver of the Month”, and look forward to discussing these incentives with SCWMA management.

All instances of excessive contamination will be logged for incorporation into quarterly reports.

Screening and Sorting

Once tipped in the appropriate zone:

- Materials from residential green cans/transfer station will be screened. The screen will be equipped with a magnet to pull out metals.
 - Fine-screened materials will be blended with commercial food scraps, adjusted for moisture, pulped, and pumped to the anaerobic digestion plant. A separate contaminant removal system occurs at the beginning of the anaerobic digestion process.
 - Coarser materials (CM) will be directed to the sortline for the removal of contaminants. The electric sort line consists of a 5' wide conveyor belt equipped with an overhead magnet to remove metals.
- The sort line will be designed to safely accommodate 6 sorters (3 on each side). The sort line is equipped with a shut-off system that can be employed to temporarily stop the conveyor belt when a more contaminated load comes through or for safety reasons.
- Sorters will be trained to understand the importance of:
 - Meeting CalRecycle’s newly adopted requirement of <0.5 % by weight contamination rate in the finished product.
 - The direct relationship between sorting and the quality of the compost and mulch products available for sale.

- Maximize diversion of recyclables away from landfills.
- Health and safety standards
- Cleaned, ground CM will be sent to the LTP compost facility as needed for bulking material.
- The electric sortline will remove organics that do not meet California Department of Food and Agriculture standards for organic input products. These “non-CDFA” organics will be composted separately in a non-organic line as available. Most of this material will be cardboard. Other “non-CDFA” organics that would be separately composted include biosolids that exceed LTP’s capacity to compost. These biosolids would not flow through the receiving station, but would be delivered directly to the “non-organic” compost area and mixed with other “non-CDFA” organics for composting.
- Sorted organics will be ground, blended with digestate from the anaerobic digestion plant, adjusted for moisture content (as needed) in a LuckNow mixer, and transported to the CASP composting system. The appropriate transport system will be determined at 50% design.
- Sorted commercial food scraps will be delivered directly to the anaerobic digestion plant. Certain agricultural materials, particularly horse manure, may also be directed to the anaerobic digestion plant or may be incorporated with the residential organics for composting, depending on their highest use.
- To maximize our recycling rate, recyclables will be sorted separately and taken to a local materials recovery facility (MRF) as mixed recyclables. In Section 6, we clarify that these recyclables are not a “Residual” for calculating whether we have exceeded the monthly limit for disposed Residuals.
- Non-recyclable inerts and garbage will be disposed of at the Central Disposal Site.
- Self-haul materials will be ground and processed for mulch production. Reusable lumber, firewood, etc. will be sorted for resale. Due to higher contamination rates, wood scraps from transfer stations will be sorted prior to being processed for mulch production. Outreach efforts will include transfer stations and promoting the need for self-haul materials to be delivered as free of contamination as possible, particularly pressure treated wood.

Employees involved in load checks and working on the sort line will be trained in health and safety and, in particular, identifying and handling hazardous waste (to OSHA standards). These team members will be provided with appropriate personal protective equipment (PPE) (gloves, goggles, etc.). Supervisors and managers will pay close attention to each employee’s attention to detail when sorting, general attention to safety best practices, and adherence to mandatory work breaks to avoid fatigue.

Hazardous waste will be removed and discarded in accordance with the facility’s Health & Safety Plan. **SCS has a thriving health and safety practice, and will design a site-specific Health and Safety Plan for the facility.**

When hazardous waste is encountered, we will follow the communication protocol to be mutually agreed to with SCWMA. This protocol will likely include contacting one or more of the following:

- SCWMA staff.
- Renewable Sonoma Team members.
- The customer who delivered the load.
- The local environmental health department.

Handling in Negative Air Pressure Building

All accepted organic material will be unloaded, sorted, mixed, and processed in a negative air pressure building that will include appropriate air curtains at truck entrances. The air exchange rate will be managed to provide safe working conditions, in compliance with regulatory requirements and Best Management Practices (BMPs). Exhaust air vacated from the building will be treated through a biofilter to control emissions of odors and volatile organic compounds (VOCs), in compliance with BAAQMD regulations. To optimize filtration efficiency, air from the building will be blended with air from the CASP system.

All systems delivering feedstock to the digester will be enclosed and/or in pipes. All biogas output from the digester will be via in pipes.

Composting Facility

To minimize environmental impacts and maximize operational efficiency, Renewable Sonoma will operate a CASP composting system – a state-of-the-art composting technology that complies with all state and local regulations, and meets BAAQMD Best Available Control Technology (BACT) standards.

Our composting operation will include a mulch program and a recycled materials program (e.g., for reusable lumber and firewood). *Emphasis will be placed on highest and best use of each type of organic material.*

The CASP composting system will be designed and supplied by subcontractor, Engineered Compost Systems (ECS).

Engineered Compost Systems, Seattle, WA

ECS provides a modular approach to composting system design, which is one of the primary reasons we have selected them to work with us on delivering our solution. They also provide full-service technical assistance for all aspects of planning, permitting, designing, installing, operating, evaluating and analyzing a compost facility and its processes.

We will draw on ECS's comprehensive composting equipment and operations expertise, as needed, to ensure our service to SCWMA and our customers meets expectations at every turn.



Founded in 1999, ECS's nine-person team has provided comprehensive process design and technical consulting services to over 80 operating facilities in North America (including in California), Europe, Australia and New Zealand; and has provided compost systems, technology and on-going technical support to over 50 client-owned composting facilities.

Tim O'Neill, President of ECS, will direct ECS's services to Renewable Sonoma on the project. Tim's resume is included in **Appendix E**.

Primary Phase – Active Compost

The mass bed aerated compost pad will have a concrete back push wall and floor. A mass bed design will be employed in phase one. This maximizes the volume per square foot processed while minimizing cost. The push walls and floor will be constructed with specialized concrete that can tolerate the housing of organics without deteriorating. The mass bed will be filled in 20 zones, 33 feet wide, 90' long; each zone identified and dated.

The aeration floor zones will be individually controlled to continuously provide an ideal amount of air to optimize composting operations and control odor. Temperature sensors built into the CASP system design continuously collect and analyze temperatures through a computerized feedback system that adjusts airflow as appropriate. Temperature readings will be logged. Temperatures in Phase one are taken for process control only, not to achieve pathogen reduction. Reverse aeration will be used to achieve even temperature profiles in the piles. Avoiding higher temperatures reduces odor potential. Additional information on composting facility design and odor control, provided by ECS, is included in **Appendix K**.

The air ducts in the CASP system also serve as a leachate water collection system. The nutrient-rich leachate will be pumped back to the feedstock inside the receiving building through a piping system.

Each pile will have a 10" to 16" organic cover as a biofilter to control odor and VOC emissions. Unscreened compost and or overs may be used as a biolayer. The biolayer will also facilitate the even distribution of temperature in all material below the biolayer for optimal processing outcomes.

In the final stage of phase one, the material will be allowed to dry out up to a threshold of >40% moisture. Drying out of the compostables creates sufficient capacity in the pile to accept nutrient rich processing water from the anaerobic digestion plant.

Note that the most volatile fraction of the organics will have been processed already in the anaerobic digestion system, which further reduces the potential for odor impacts after the anaerobic digestion sludge has been mixed with the CM.

During the primary phase, most of the rapidly available organic compounds will be composted through microbial action. As a result, most odiferous compounds will have been destroyed and a more stable product will be transferred to the secondary phase: curing.

The primary process will take approximately 25 days.

Secondary Phase – Curing

When the primary process is complete, a loader will remove the material from the zone to be harvested into the LuckNow mixer/agitator. Water from the digester will be blended with the organic material to bring the mixture back to a moisture content of about 60%. Using a loader, the moisture adjusted material is then placed into the concrete bays for phase 2 curing.

The secondary phase location will consist of 16 concrete bays 33' wide, 90' long separated by concrete pony walls. This design aids maximum additional pathogen reduction in each bay and minimizes the risk of cross contamination of pathogens.

To aid additional pathogen reduction, a new 6"- 10" biolayer will be placed over the piles. The biolayer from phase 1 is incorporated into the compost mixture. Temperature sensors built into the CASP system design continuously collect and analyze temperatures through a computerized feedback system that adjusts airflow as appropriate. Temperatures will be monitored and logged.

In Phase 2, sufficient pathogen reduction will be achieved in 3 days in all composts. During the last week of composting, amendments may be added to the compost to create specific product specifications. In particular, rice hulls may be added to create compost to improve heavy clay soils. In such cases, pathogen reduction will be achieved in the last week of production.

In the secondary phase, organic materials decompose until a stable, mature compost has formed. For optimal composting quality, appropriate moisture conditions will be maintained while towards the end the material is forced to dry through aeration to a 35-40% moisture threshold. The compost is then in ideal condition for transfer to the screening plant in preparation for shipment.

Note: Approximately 25% shrinkage occurs to materials being processed in each the primary and secondary phases (particle size reduction) for a total of approximately 50% reduction at the finished product state.

The secondary process will take approximately 30 days.

Regulatory Compliance

Training

Training on subjects pertinent to operations and maintenance, including physical contaminants and hazardous materials recognition and screening, including odor impact management and emergency procedures, is required. Renewable Sonoma will implement its Contaminant and Hazardous Waste Management Protocols and Odor Impact Minimization Plan (OIMP) training at appropriate times (See **Appendices J and L**, respectively).

Pathogen Reduction

CalRecycle regulations specify requirements for pathogen reduction through temperature monitoring. For CASP technology with a biofilter layer, the CalRecycle requirement is that all feedstock is exposed for 3 days to temperatures over 131°F. In addition, pathogen reduction will be confirmed at least monthly through a third-party state certified laboratory. Our system is designed to be in full compliance.

Metals

An analysis for metal concentrations is also required before compost material can leave the site. Testing for metals will be done through a third party, state certified laboratory at least monthly. Sonoma Compost introduced stricter thresholds for metals in compost for Biodynamic Compost. Compost that does not meet CalRecycle regulatory requirements will not be released. Product that fails to meet standards may be retested and if after re-testing still does not meet the standards it will be reprocessed.

To further enhance consumer confidence in our composting products, Renewable Sonoma will also test for a number of other parameters, including nutrients, organic matter, stability, maturity, weed seeds, pesticide residue (organochlorines and Clopyralid), etc. Compost that meets the USDA National Organics Standards Board (NOSB) will be registered with CDFA. Additional registrations may also be considered, as appropriate.

Physical Contaminants

CalRecycle adopted physical contamination limits on finished products effective January 1, 2018, but there is still no standard for how this limit will be effectively verified. As part of its leadership in statewide regulatory policy for composting projects, Renewable Sonoma is working with the industry at large and UC Riverside to develop an acceptable protocol. We are confident that by the time a new facility opens in Sonoma County we will have a trustworthy verification system in place.

Record Keeping Requirements

Required records will be kept on-site for inspection during regular business hours for at least 5 years. Records kept on file will include:

- Special Occurrences Log,
- Complaints log.

- Tonnage and type of feedstock received.
- Load checking log.
- Laboratory analyses for pathogens reduction and metals.

Sonoma Compost has a long history of meeting or exceeding the required standards for its compost products and, in this regard, has an unparalleled reputation in the Sonoma County residential, commercial and agricultural communities. SCWMA can have the highest degree of confidence that Sonoma Compost will continue to produce compost products that maintain this well-earned reputation for excellent quality at competitive prices.

Screening

After the secondary process is complete, material will be screened through an electric trommel screen to obtain the desired particle size. Compost will be screened to a particle size of < ½ inch. A trommel screen will be employed since the CASP system produces a finished product that has a screenable moisture content, regardless of weather conditions.

Our experience has shown that trommel screens produce a better particle-sized material then, for example, a star screen (formerly used by Sonoma Compost). This results in higher quality, more marketable end products.

Screened compost is further cured in the storage area.

Overs material > ½ inch will be sold as mulch (if clean) or reintroduced into the compost system (if not marketable).

Overs that have a high level of contamination will be run over the sort line once more to remove excess contaminants.

Renewable Sonoma believes it is no longer practical to use overs in biomass power plants. Alternative markets for highly contaminated overs will need to be identified. Re-composting is potentially the highest and best use for this material, unless it is clean enough to be reprocessed as a mulch.

Compost Marketing

Current Market Conditions for Recyclables

Renewable Sonoma's owner, Sonoma Compost, successfully marketed compost and mulch in Sonoma County from 1993 to 2015. The Sonoma Compost team developed strong demands in a wide array of markets and developed positive relationships with all segments of the market. Sonoma Compost produced products that met the strict quality standards of a range of customers, including farmers, landscapers, parks and recreation, schools, and



backyard gardeners — all of whom came to rely upon Sonoma Compost for high-quality products at highly competitive prices.

Renewable Sonoma is convinced that when these communities learn Sonoma Compost is going to build and operate a new, state-of-the-art composting facility to serve them, they will all enthusiastically embrace Sonoma Compost's return to a place of prominence in the County's partnerships with the private sector.

Widespread and enthusiastic support for the return of Sonoma Compost is evidenced by the many letters of support provided in Appendix B.

Compost and mulch products will be marketed under the Sonoma Compost brand (as a Renewable Sonoma Company) to leverage the widespread trust and loyalty various communities in the County have in the Sonoma Compost name.

Our Team will strive to produce the same wide spectrum of high-quality, high-value products that Sonoma Compost did previously, including, but not limited to:

- *Sonoma Compost*: A basic low-nitrogen compost for native plants and grapevines.
- *Hi-test*: A higher nutrient compost for flowers, vegetables, and other heavy feeders.
- *Mallard Plus*: Similar to Hi-test, but with rice hulls added for better drainage.
- *Terra Lite*: Similar to Sonoma Compost, but with rice hulls added for better drainage.
- *Laguna*: A new compost that is not CDFA organic, containing biosolids, and possibly other non-CDFA compostables.
- *Amended composts*: Include recycled sheet rock and other commercial amendments such as rock dust, green sand, worm castings, rock phosphate, etc.
- *Vineyard Mulch*: Made from self-haul yard debris to be used on soil surfaces.
- *Path Mulch*: Made from wood scraps to be used on soil surfaces.
- *Recycled lumber*: Usable wood recovered from incoming wood scraps.
- *Firewood*: Made from logs and tree trunks found in self-haul yard debris.

Emphasis will be on maximizing production of CDFA-compliant organic compost. However, with the LTP having biosolids compost and feedstock for Renewable Sonoma to process, it will make sense to serve the non-organic market as well. The City of Santa Rosa has expressed interest in having Renewable Sonoma market their WaterSmart Compost to further enhance the acceptability of the product in the market place and to promote the LTP



as a true recycling facility. Non-CDFA organic materials from the sort line would be used in this product line as available, e.g. cardboard. This line of compost opens doors to expanded organics recycling not practiced in the past. While this would be a new product, Renewable Sonoma is confident that, if economically priced, demand for this product could be strong.

Additional information on **Product Quality Specifications** is provided in **Appendix M**. Additional information on marketing is provided in our **Marketing Plan** in **Appendix N**.

Anaerobic Digestion and Biogas Conditioning Facility

Technology

BIOFerm will design, install, and operate two (2) COCCUS® 5000 CSTR anaerobic digesters. Each COCCUS digester tank is optimized for efficient biogas production from low-solids organics, such as food scraps, biosolids, manure, etc., and operates between 8-13% total solids (TS). Nearly 500 COCCUS anaerobic digestion tanks have been successfully installed and operated globally.

As organic materials ferment inside the tank, biogas is continuously created and collected in a dual-membrane gas storage bag located in the tank's headspace. Inside the COCCUS tank are large, BIOFerm-patented REMEX® paddle mixers. Optimum biogas yields are ensured through the continuous and homogenous horizontal/vertical mixing of organics with the REMEX paddle mixers. All biogas plant functions are 100% automated, and the control system is accessible from any computer connected to the Internet.



Each COCCUS 5000 digester is 86 feet in diameter, 30 feet in wall height, and has a working volume of 1,120,000 gallons. Digester sizing is large enough to permit the addition of roughly 8,000 to 10,000 tons/year of supplementary organic feedstock, such as manures, biosolids, agricultural materials, food processing scraps, etc.

Separation Process

Following digestion of the feedstocks, a single or double stage separation process will be used to produce solid and liquid fractions for additional uses. The solid fraction will be delivered to the Renewable Sonoma compost operation; the liquid fraction will be used in the compost operation for moisture adjustment and nutrient value.

Certain materials may prohibit some compost from achieving California Department of Food and Agriculture (CDFA) registration. Renewable Sonoma will implement a program to create non-CDFA organic compost.

Biogas Conditioning

Biogas leaving the COCCUS digesters will be conditioned prior to delivery to the combined heat and power gensets (CHPs). Glycol chilling will be used to reduce moisture in the biogas and particulate filtering; and activated carbon in skidded vessels will reduce hydrogen sulfide (H₂S), to levels appropriate to CHP use.

Approximately 74,000 mmBtu/year of biogas at 60%-65% methane will be produced by the planned input of organics, which is sufficient to generate approximately 960 kilowatts (kW) of electrical power over a year at 92% capacity factor. **This creates a Synergistic Use Opportunity for the City to potentially avoid installation of one of the two Selective Catalytic Reduction (SCR) systems planned as part of the Microgrid project.** The SCR units are required on the CHP gensets as a BAAQMD condition of fueling them entirely with natural gas. Renewable Sonoma believes that an SCR unit would not be required on one of the CHP units in the Microgrid project if it were fueled entirely by biogas. It should also be noted that additional organic materials could be sourced and digested, if desired, to increase biogas output by an additional 10-25%.

The BIOFerm AD facility described above will require approximately 1.5-2.0 acres of land. Because the Renewable Sonoma Solution will be located near the LTP operations, this creates Synergistic Use Opportunities for the LTP to provide the digesters with process water and heat from the CHPs.

Storage

LTP management has informed Renewable Sonoma that biogas storage capacity would be beneficial to LTP management, particularly in relation to the Microgrid project under development. We understand that the LTP would use the additional storage to increase the amount of valuable high-ramp-rate dispatchable capacity it can make available to the Microgrid and/or the California Independent System Operator (CISO).

Renewable Sonoma can provide additional storage in at least three distinct ways:

1. Storage of conditioned biogas.
2. Additional battery storage.
3. Pipeline storage.

These storage options are described in more detail in our proposal to the City. Renewable Sonoma has proposed a collaborative dialogue with LTP management and the Microgrid development team to identify the most cost-effective method to install additional storage for the Microgrid project.

Regardless of the form of storage ultimately adopted, additional storage would have unique value to the Microgrid as well as to the California Independent System Operator (CISO). With very few exceptions, high-ramp-rate capacity is provided to the grid by gas-fired combustion turbine or gas-fired combined cycle power plants, both of which are fueled by natural gas. Renewable Sonoma's capacity, however, would be produced from biogas, which would be Renewable Dispatchable Capacity.

Renewable Sonoma has not assessed a specific value to this unique capacity product in our proposal, but we believe this represents a potentially significant benefit to the City/SCWMA.

Key Design Features

The Renewable Sonoma solution will be designed and operated to address important regulatory concerns including but not limited to water, air quality, traffic, and noise.

Water

The composting process requires moisture content of between 40-60%. Therefore, water will need to be added to the incoming organic materials throughout most of the year. Water needs will vary from season to season. For example, we estimate that up to 60,000 gallons per day (gpd) may be used during the dry season, with significantly less being used during the rainy season.

Compost water needs can be met from multiple sources. Digestate solids coming from the digester will have a high moisture content, which will offset most of the composting process water needs. Liquid digestate from the digester can also be used to add moisture to the initial feedstock before it goes to the CASP and between phase one and two. Recycled water from the LTP may be utilized, as needed in the primary and secondary stages, as needed.

The anaerobic digestion facility will require relatively small amounts of water (in comparison to the needs of the composting facility) to maintain process conditions in the digesters. Recycled water from LTP can be utilized for this purpose. Liquid digestate not utilized by the composting operation will be treated for recycling to the digester feeding system thus keeping recycled LTP water usage to a minimum.

Leachate

Leachate from the CASP will be recycled within the composting system at the mixing phase after the grinding phase. Excess water from the AD plant will also be recycled within the composting system, both as a resource.

Storm Water

The site where our solution is located will be fully contained and paved to meet all water requirements, and will be constructed and managed as a Zero Discharge facility. Run-on will be prevented from entering the site and run-off will be prevented from leaving, except through the pipeline to the LTP.

A detention/retention pond or tank will be installed. This pond/tank will be of sufficient size and capacity to withstand 100-year storm conditions over a 24 hour period, subject to agreement with LTP management.

When storm conditions cease, collected storm water will be metered in to the LTP, as appropriate. Renewable Sonoma intends to work collaboratively with LTP management to ensure we design and construct an ideal storm water retention and release system. This will

involve discussion on site, cost, appearance, durability, and maintenance/warranty alternatives.

Local Area Flood Control

Renewable Sonoma is aware of floodplain concerns that may affect the project site. Existing and historical information, including but not limited to Federal Emergency Management Agency (FEMA) and other maps (i.e. ArcGIS, City maps, historical aerials, and Precipitation Isohyets) will inform the preliminary layout and design of our solution, in conjunction with requirements set forth in state and local construction, industrial, and waste discharge water quality regulations. SCS has performed numerous projects in flood-prone areas where SCS has designed practical and successful surface water control systems for clients. Our Team's overall strategy includes BMP implementation and storm water management controls to protect and divert water from flooding events to the maximum extent feasible and practical. SCS's Storm Water Manager for the Western U.S., Jonathan Meronek, is highly skilled in this specialized area and will lead this aspect of our Team's services.

Odor

Highly effective odor control is an essential component of the project. People who live or work near the proposed composting facility should not smell foul or disturbing odors emanating from the site.

Keenly aware of this critical issue, Renewable Sonoma has developed a draft **Odor Impact Minimization Plan (OIMP)** to comply with CalRecycle full permit requirements (see **Appendix L**). We propose offering City, LTP, and SCWMA management an opportunity to review and contribute to the OIMP before it is finalized.

Key elements of the OIMP include:

- Best available control technology (BACT) will be employed to mitigate odors.
- Organic materials will be delivered to a receiving area located within an enclosed building. The building will be a negative pressure environment, where evacuated air is treated through a biofilter before release into the atmosphere.
- The state-of-the-art CASP system is designed and manufactured to provide optimal aeration to minimize odors.
- The CASP system will be located on the west side of the property, furthest removed from the nearest residents.
- During the primary processing phase (when biological activity is greatest and more volatile organics are present), compostable material will be covered with a biofilter layer. Since our pathogen reduction takes place in the secondary phase, a biofilter will also be placed on phase two.
- Optimal moisture content will be maintained throughout the composting process to further minimize odors, including moisture in the biolayer.

- Temperatures within each pile will be continuously monitored through a computerized airflow loop control system that assures operation in the ideal temperature zone. Reverse aeration will be employed to even out the temperature profile in the compost pile, thereby reducing odor.
- Site conditions will be monitored on a daily basis. If potentially objectionable odors are detected, corrective measures will be taken immediately.
- An open and transparent communication protocol will be established to track comments and complaints, as well as Renewable Sonoma's responses thereto.

Noise

As with odor control, we understand the importance of effective noise control. Renewable Sonoma's **Noise Management Plan** is provided in **Appendix O**.

Key elements of this Plan include:

- Material receiving and processing, excluding grinding, will take place in an enclosed building and will not be active during evening and night hours. Grinding, which also will not be active during evening and night hours, will be partially enclosed for noise control.
- Electric grinders and screens will be used.
- Loaders and other moving equipment equipped with safety beepers will not be operated in evening or night hours.
- All fixed equipment will be specified to not exceed 85 dba at 3 feet during operation (standard engineering practice).

Fire Prevention and Extinguishing

Heat is required for the composting process and will develop spontaneously, so the danger of fire must be mitigated and controlled at all times. Fires do not start in well managed compost piles. Typically, fires will be seen in the feedstock stockpiles or in mulch and 'overs' stockpiles. Incoming material may sometimes combust because a heat source is embedded in the feedstock, such as hot BBQ coals. Spotters will be trained to look for smoke in incoming loads.

The chance of fire is increased when:

- Piles are over 9 feet in height.
- There are wet/dry zones in the pile (often seen after rains).
- Piles remain static for more than one month.

The incoming feedstock will not sit in a stockpile for longer than 72 hours at any single stage until it reaches the CASP system. In the CASP system, the moisture content is evenly distributed, temperature is monitored and regulated, and the residence time is 30 days or less. These piles are not at risk for spontaneous combustion.

Stockpiles of mulches and overs are not anticipated to stay on site for more than 30 days, but will be turned after 30 days should that happen. All the energy has been removed from finished compost piles and no fires are anticipated in these piles. Our **Fire Prevention and Extinguishing Plan** is provided in **Appendix P**.

Traffic

Access to our composting facility will be from Meadow Lane. This will mitigate traffic disruption on Llano Road. However, the access road on Meadow Lane will need improvements. Careful analysis of projected peak volumes of traffic will be undertaken before the precise location of the site entrance is determined.

Our site plan design will also factor in minimizing of cross traffic. This will be achieved by having incoming traffic enter on the right side of the entry and flow through the facility counter clockwise. Retail activity will be located on the distant east side of the site, close to the exit point. The receiving building will be adjacent to the entrance. This design maximizes efficiencies for haulers, minimizes on-site travel, essentially keeps operational traffic separate from customer traffic, and pays close attention to the safety of people, vehicles, and infrastructure.

Hours of Operation

The Renewable Sonoma Solution will be open to receive and process organic materials and sell finished products 6 days per week, Monday through Saturday:

- General public hours: 7:00 am to 5:00 pm.
- Operational hours: 6:00 am to 6:00 pm.
- Emergency hours: 24/7/365.

These hours of operation are consistent with the SCWMA Agreement and we believe they succeed in balancing community convenience with traffic and noise considerations. No vehicles will transport organics to and from our site during evening and night hours.

Emergency Contact Protocol

As part of our overall Communication Plan for the project, Renewable Sonoma will develop an Emergency Contact protocol. Appropriate members of our Team will be available to respond to emergency situations 24 hours a day, 7 days a week, throughout the year. Specific response times and best methods of contact will be fine-tuned during the project kick-off meeting after project award. Preferred methods of communication for all parties involved in the project will be gathered and documented.

A copy of the final Communication Plan for the project will be provided to SCWMA after the project kick-off meeting.

Synergistic Use Opportunities

Our discussions with LTP have convinced Renewable Sonoma that truly exceptional Synergistic Use Opportunities would be created by LTP and Renewable Sonoma operating together. These synergistic use opportunities are described below.

With the Existing LTP Generating System

- The LTP CHP system has four nearly new 1.1 MW gensets, but the LTP produces only enough biogas to operate the equivalent of about 1½ generators. In our team's initial discussions with LTP management, LTP management noted that BAAQMD does not permit the idle CHP gensets to use more than 10% natural gas unless they are equipped with Selective Catalytic Reduction (SCR) systems. **This would make the additional biogas from Renewable Sonoma's digesters very beneficial to LTP, in that it would allow increased electricity generation without requiring the City to invest in one of the required SCR systems** (see first bullet under "With the Microgrid Project in Development" below for further details).
- Although the Microgrid Project has changed LTP's circumstances somewhat, LTP's ability to use Renewable Sonoma-produced biogas in its generators can still create substantial benefits. **Some of these benefits are quantifiable in dollars, while others contribute to meeting state & local GHG reduction goals and mandates at no additional cost to the City.**
- **Use of Renewable Sonoma-produced biogas will also allow the City to reduce the amount of electricity it purchases to meet LTP loads, as well as the amount of natural gas it will need to purchase to operate the currently idle gensets.**
- **Sale of waste heat from LTP's CHP system will produce additional revenues for the City.** The dollar amount of these benefits to the City will depend on the ultimate structure of the City Agreement with Renewable Sonoma.
- **Electricity generated from Renewable Sonoma-produced biogas will have a negative carbon footprint** — calculated using California Air Resources Board (CARB) methodologies and assumptions. **Thus, the Renewable Sonoma Solution will allow LTP to contribute to meeting state and local GHG reduction goals and mandates at no additional cost to the City.**

*NOTE: Team member Brian Eberly, Technology Principal with reBIO, has calculated the potential carbon savings associated with implementation of our solution. Brian's calculations were analyzed by two independent analysts unassociated with our Team who have expertise in GHG emissions calculations. The calculations are provided in **Appendix Q**.*

With the Microgrid Project in Development

The City is embarking on a pioneering pilot Microgrid Project at the LTP, in conjunction with the Trane Company and with the financial support of the California Energy Commission

(“CEC”). The Renewable Sonoma solution offers multiple Synergistic Use Opportunities if developed in parallel with the Microgrid Project:

- **First and foremost is the City’s ability to reduce its cost contribution to the Microgrid Project.** In order to use 100% natural gas to fuel two of the currently idle CHP gensets in the Microgrid Project, BAAQMD requires that SCR units be installed on both gensets. The CEC is funding the cost of one of the SCR units and the City is committed to funding the other. The volume of biogas produced by Renewable Sonoma’s digesters is sufficient to fuel one of these two CHP gensets. BAAQMD does not require the SCR installation on a genset if at least 90% of the gas is biogas. **Thus, the City could avoid the \$750,000 cost of installing an SCR system on the second genset (if desired).**
- **Fueling one of the LTP gensets with Renewable Sonoma-produced biogas will allow the LTP to reduce its purchase of natural gas by as much as 50%. Depending on the terms negotiated in the contract, the City could be less impacted by the vicissitudes of the natural gas market and CPUC tariff proceedings.**
- **Renewable Sonoma’s storage options can supplement the battery storage that is part of the Microgrid Project. This can significantly increase the ability of LTP to obtain added value by offering more rapid-response capacity to the grid. If the City’s potential benefit from the rapid-response capacity is, say \$1,000,000 per year, Renewable Sonoma is confident it can increase this benefit by 50% or more, depending on the configuration negotiated and included in the governing contract.**
- **Because this rapid-response capacity would deliver energy fueled by biogas, the Microgrid Project would be able to offer Renewable Dispatchable Capacity to the ISO. This is a rare product that Renewable Sonoma believes will attract a premium price — a potentially significant financial benefit for the City.**

With Existing LTP Compost Operations

Integrating Renewable Sonoma’s state-of-the-art composting operation with LTP’s existing compost operation can create multiple Synergistic Use Opportunities for the City:

- Restoration of a reliable, cost-effective, in-County source of woody biomass that is needed to produce LTP’s biosolids-derived compost. **Renewable Sonoma believes this will save the City approximately \$40,000 per year, while using materials supplied by a local business.**
- Refurbishment of the existing City-owned compost operation is estimated to cost at least \$1,000,000. This cost of refurbishing and extending the life of the current LTP compost facility could be incorporated into Renewable Sonoma’s overall capital budget. **This would allow the City to amortize this obligation over the term agreed to in the contract to be negotiated between both parties.**
- **The City-operated compost business (and the LTP) will benefit from association with the highly regarded Sonoma Compost brand, and because Sonoma Compost intends to promote non-CDFA products in the larger market place.**

- **The Renewable Sonoma composting site will include a safe environment for residents and businesses to visit and purchase compost and mulch products on a retail basis. Due to safety concerns, the existing LTP compost site cannot accommodate this kind of traffic. Renewable Sonoma's presence will allow the LTP composting business to focus on maximizing large-bulk sales, and we will provide them with additional storage capacity, if needed.**

With the City and County

Additional benefits of siting the Renewable Sonoma Solution on City-owned land near the LTP include:

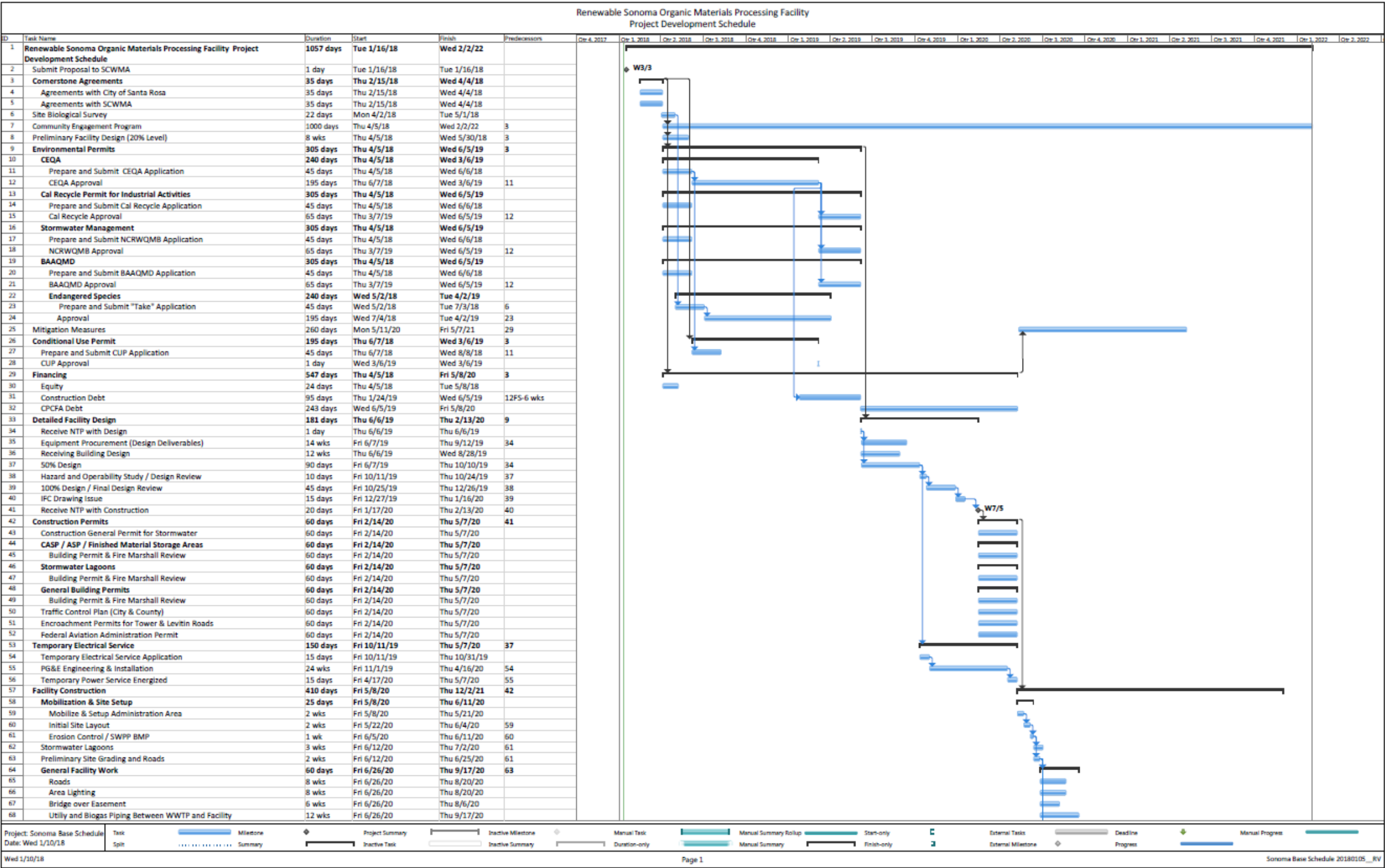
- **Long-Term Lease Revenue.** It will be critically important for SCWMA to examine the relationship between each bidder's proposed lease sum and the verifiable value of the synergistic use opportunities each is touting. *We are extremely confident that the values associated with the synergistic use opportunities our Team is touting can be verified and will be hard to match.*
- **Local Jobs.** Re-establishing in-County processing of disposed organic materials will create local jobs.
- **Major Reduction in GHG Emissions.** Eliminating the long-haul runs of diesel trucks taking organic materials out of the County and bringing compost products back into the County, day after day, week after week will have an impact on reducing GHG emissions by 24,000 tpy – the equivalent of removing 5,000 cars from roads.
- **Convenient & Affordable.** Re-establishing an in-County source of high-quality, competitively priced compost products at a central location is convenient and cost-effective for all purchasers of compost products in the County, but especially those who routinely purchase in bulk (farmers, vintners, etc.). Tangible savings may be marginal for most individuals, but in the aggregate savings could be substantial.
- **Sustainability.** Re-establishing the organics cycle locally is far more sustainable in the long-term than any arrangement that involves other counties:
 - **It gives the City and County greater control** over compliance with AB 341 (source reduce, recycle, or compost 75% of all solid waste by 2020), AB 1826 (mandated food scraps and yard waste source separation and recycling for businesses that generate 4 cubic yards or more of organic waste per week), and SB 1383 (Short-lived Climate Pollutants, Methane Emissions).
 - **It restores the interaction and feedback loop** among buyers and producers of compost that Sonoma Compost worked tirelessly to develop over 22 years of continuous operation in Sonoma County.
 - **It provides renewed local availability of organic soil amendments** that create soil health and increase soil carbon, which reduces GHG in the local atmosphere.

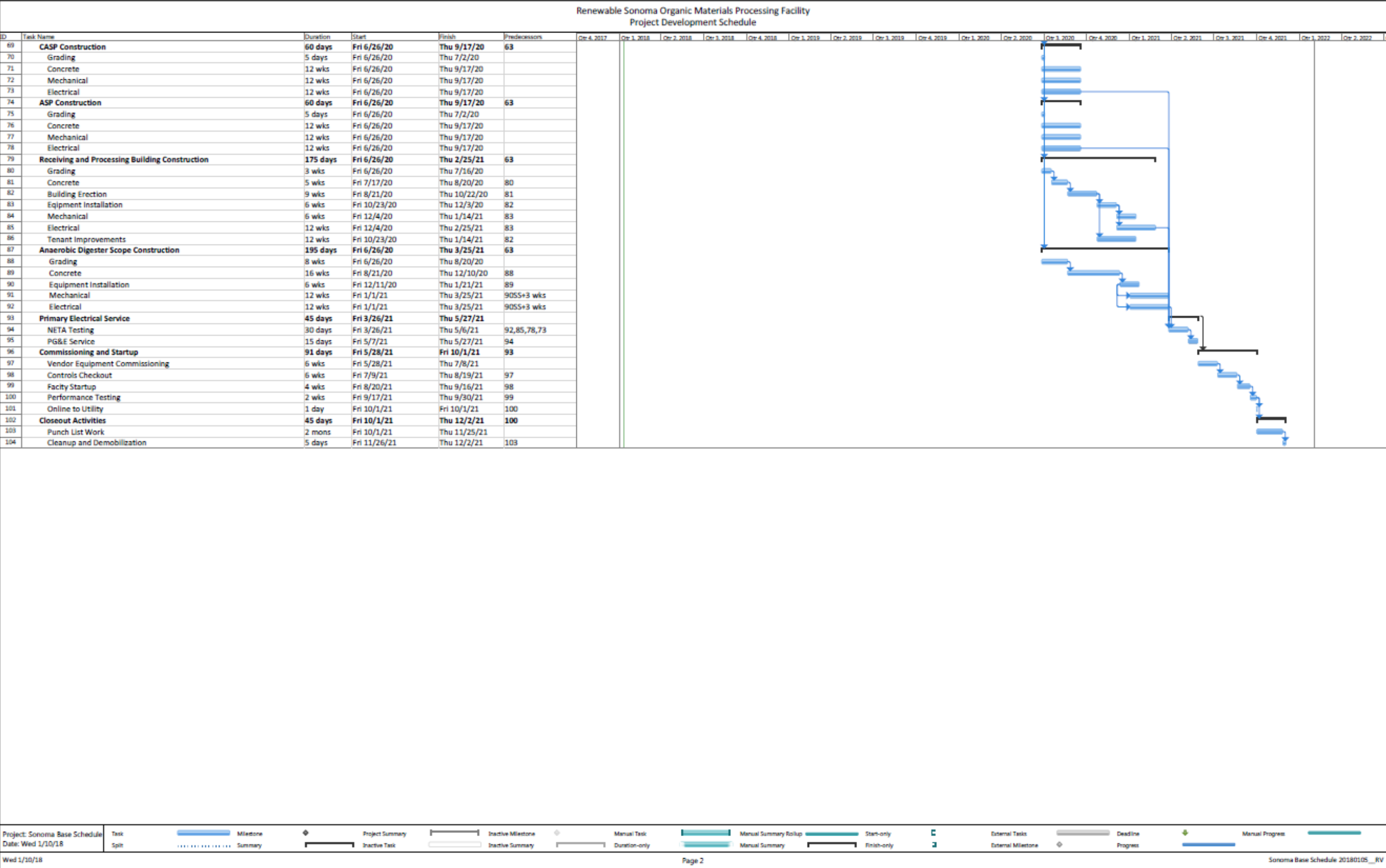
- **Clean Energy Leadership.** Successfully integrating a Microgrid Project at a wastewater treatment plant fueled in large part by biofuels from an anaerobic digester is a superb example of pioneering clean energy leadership.

Development Plan and Schedule

The Development Plan and Schedule begins with execution of the Cornerstone Agreements, followed by Permitting, Design, Construction, and Commissioning phases. Our schedule is provided below in Figure 6.

Figure 6. Schedule





Cornerstone Agreements

Award of the Project to Renewable Sonoma by SCWMA will lead directly into negotiation and execution of the Cornerstone Agreements for the Project:

1. A binding agreement with the City on the site Location, Configuration, Lease Rate and Synergistic Use Opportunities (“City Agreement”), to be followed by
2. A binding agreement with SCWMA on feedstock deliveries and processing (“SCWMA Agreement”).

These agreements are the foundation on which development of the Project will proceed.

The text and form of the SCWMA Agreement is included in the SCWMA RFP. Renewable Sonoma is pleased to agree to the SCWMA form Agreement with several suggested modifications and additions as enumerated in Section 6: Service Exceptions/Alternatives. Project-specific details, including the Technical Proposal, feedstock volume and characteristics, Contamination Protocol and pricing, will be added as exhibits to the SCWMA form Agreement. The term of the SCWMA Agreement will be 20 years from commencement of commercial operations, with the addition of two options to extend the Agreement, each option being for a term of 5 years.

Upon selection by SCWMA, Renewable Sonoma intends to re-commence collaborative discussions with LTP/City management on project-specific details. The intent of these discussions will be to examine the best possible location(s) for our Solution to mitigate CTS impacts; explore the details and any potential barriers to achieving the many Synergistic Use Opportunities identified in this Proposal; evaluate, at a budgetary level, the several options available; and decide the configuration of our Solution that best achieves the objectives of LTP/City/SCWMA management. Renewable Sonoma intends to keep SCWMA informed as we negotiate project-specific details of the City Agreement to assure that the final form of the City Agreement is consistent with SCWMA expectations.

We anticipate negotiation of the City Agreement will take approximately 3 months. That could be delayed because of the additional workloads on City staff due to the catastrophic 2017 fires. We have reviewed the City’s agreement with Trane U.S. Inc. regarding the Microgrid Project and have informed the City staff that we are confident that we can agree to most of the general business terms in that agreement, with a minimum amount of negotiation. Project-specific details and the nature of mutual obligations will, of course, be different. Renewable Sonoma anticipates several terms of the City Agreement will be identical to the terms of the SCWMA Agreement.

Permitting

Discretionary Approvals

Environmental permitting requirements are well-known for composting and anaerobic digestion projects throughout California. Renewable Sonoma commits to submit thorough,

factually-supported applications for environmental approvals and to respond timely to questions or concerns that may be raised.

It is equally important that the Lead Agency work closely with all regulatory agencies that have permitting jurisdiction over our solution to be sure they all are cooperating to reach an expeditious outcome. There are several laws that either require or encourage state agencies to act expeditiously on applications, with the Permit Streamlining Act having the broadest application.

As reducing GHG emissions from landfills has become an increasing priority in recent years, the legislature has imposed mandates on local governments, such as AB 341, AB 1826 and AB 1383. At the same time, AB 1045 directs state agencies with permitting jurisdiction over composting and anaerobic digestion projects to coordinate their work to eliminate unnecessary delays in approving such projects. **Renewable Sonoma presumes that state and local agencies with approval jurisdiction over the project will do so in a timely manner so discretionary permitting can be completed within 12 to 18 months.**

CalRecycle, which is arguably the most significant state agency with jurisdiction over the project, has taken a lead role in systematically evaluating and documenting environmental topics affecting both anaerobic digestion and composting. For example, CalRecycle has recently released a Program EIR for anaerobic digestion facilities. The Program EIR is intended to guide and aid Lead Agencies throughout the state in evaluating applications for anaerobic digestion facilities, including, but not limited to CEQA checklists, Draft EIR and Final EIR documents and draft Findings. This Program EIR provides very detailed analysis of anaerobic digestion facilities, in general, that is intended for Lead Agencies to use in the approval process. A Lead Agency can rely on this information, allowing it to focus attention on the unique aspects of a specific project that should be considered. Further details can be viewed by clicking [here](#).

As the EPC contractor for this project, SCS will perform all permitting activities under the direction of Pat Sullivan, CPP, REPA, BCES. **As noted in the example provided on Page 44, Pat is not only an expert in advancing projects through the permitting process as quickly as possible, but has first-hand experience permitting composting projects with BAAQMD in the most efficient and advantageous manner possible for composting facility developers.**

The SCWMA can have a very high level of confidence in our superbly qualified Team's ability to secure permits as quickly as possible.

Renewable Sonoma expects our approval process to be relatively expeditious for several reasons:

- **We will design-build-operate a Zero Discharge Solution that meets North Coast RWCQB standards.**
- **Our Solution has a negative carbon footprint on a net basis (as measured by CARB methodologies and assumptions). Both CARB and BAAQMD have taken**

very strong positions regarding GHG emissions and should be motivated to approve our solution expeditiously.

- **Our team has extensive experience permitting compost and AD projects in California and with BAAQMD specifically, and is fully cognizant of the latest requirements of each agency that will have jurisdiction over the Project. All permit application(s) will be completed with the utmost care to avoid repletion and revisions and expedite processing.**
- **Integrating our Solution with the LTP Microgrid Project further enhances the attractiveness and prestige of the Microgrid Project. In completing permit applications, we will present the Renewable Sonoma Solution as a model by which future microgrid projects at wastewater treatment plants can be measured.**
- **Several members of the Renewable Sonoma team are well-known and respected by regulatory officials responsible for clean air, clean water, and clean energy in northern California. Our EPC contractor, SCS Engineers, is also well-known and respected by these same regulatory agencies as an engineering consulting firm who operates with integrity and professionalism.**

AB 1045 Coordination

AB 1045 (Irwin, 2015) requires state agencies and the California Environmental Protection Agency to coordinate their activities and requirements relating to the permitting of compost and anaerobic digestion facilities. Renewable Sonoma will reference AB 1045 when encouraging all regulatory agencies with jurisdiction over the Project's permitting process to work together for maximum efficiency and flexibility.

We believe the number of major contributions our Solution offers each agency, and the potential for it to be a model for other cities and counties across the U.S. will serve as a natural incentive for the agencies to work together to streamline the permitting process.

Matthew Cotton, Integrated Waste Management Consulting, LLC

We have engaged Mathew Cotton, Principal of Integrated Waste Management Consulting, to work with all relevant agencies to encourage their timely coordination and cooperation pursuant to AB 1045. Matthew is one of the leading and most well-respected composting professionals in the State of California. He holds Sonoma Compost co-founders, Will Bakx and Alan Siegle, in high regard and adds tremendous value to our Team.

Matthew Cotton will support the Renewable Sonoma team by fulfilling the key role of encouraging all regulatory agencies to work together to optimize permitting efficiencies as mandated by AB 1045. In practice, most agencies have not yet fully embraced this initiative. Therefore, this position is a key component of our schedule management plan.

Matthew has worked in organics and solid waste management since 1986. He has served as a consultant, educator, researcher, and advocate for new and expanded organics recycling and composting programs in California and beyond. Mr. Cotton has completed

hundreds of significant organics projects, including permitting and assisting in the development of some of the major composting facilities in California. Mr. Cotton has served on the Board of Directors of the US Composting Council for over a decade, including as president for three years, and also serves on the Board of Californians Against Waste. He has published research on compost odors, compost use, climate impacts, compostable plastics, and compost facility infrastructure. He is the main author of both the SWANA Managing Composting Programs Course, and SWANA's course on Organics Collection; and the organics chapter of the SWANA/CRRRA Zero Waste Course.

In over 30 years of work Mr. Cotton has become a respected resource for all aspects of organics recycling. From providing permitting assistance to new and expanded composting, anaerobic digestion, and chipping & grinding facilities, to providing hands on odor control mitigations at organics processing, digestion, and composting facilities, to conducting important statewide studies of the California organics industry.

California Environmental Quality Act

The project will require an Environmental Impact Review (EIR), pursuant to the California Environmental Quality Act (CEQA). Current CEQA documentation for existing LTP facilities will be incorporated into the EIR documentation, as appropriate. A National Environmental Policy Act review will not be required.

The City of Santa Rosa will likely be the Lead Agency under CEQA because our solution is located on City land and integrated with a City facility. But it is also possible that the County may be the Lead Agency. Before initiating the formal CEQA process, Renewable Sonoma will first meet with key City/County officials to confirm who the Lead Agency is, clarify expectations, establish a communication protocol, identify the principal issues, and establish a schedule for the CEQA process.

The Renewable Sonoma team is well acquainted with the CEQA process from start to finish, and will be managed by Pat Sullivan, a Sr. Vice President with SCS Engineers, Managing Director of SCS's Southwest operations, and a national air quality expert. Other Renewable Sonoma team members, including Will Bakx and Leslie Lukacs, are well acquainted with local officials, including but not limited to the Local Enforcement Agency (LEA).

Initial Study

The CEQA process begins with an Initial Study that identifies and analyzes any environmental issues where potentially significant impacts are identified. The study will likely demonstrate that certain impacts are not significant in a CEQA context or can be mitigated to less than significant. Some impacts may be significant and unavoidable. CTS mitigation will certainly be addressed in the Initial Study. The results of the Initial study will form the basis for the subsequent EIR. Our team will work in concert with the Lead Agency to complete the EIR documentation, complete the environmental review, and obtain CEQA clearance with certification of the EIR.

During preparation of the Initial Study, Renewable Sonoma will begin to engage with neighbors, community organizations, staff and elected officials of the City/County, and appropriate regulatory agencies to introduce our Solution and invite input. We will also begin CTS evaluation as early in the Initial Study as possible. In order to avoid losing a full year in the CTS mitigation process, this will have to be in spring 2018.

Engagement - Neighbors and Community Organizations

Team leader, Leslie Lukacs, will direct this critical aspect of our solution. Leslie is an expert in community education and engagement, with experience throughout California and many other states. The Renewable Sonoma solution has already attracted widespread support from many community and business groups in Sonoma County, as evidenced by the letters of support included with this proposal.

Leslie will work closely with specialty subcontractor, **Craig Communications**, a northern California-based communications outreach firm that specializes in potentially contentious project development. Tracy Craig, the firm's founder and principal, worked for the Department of Toxic Substances Control (DTSC) for ten years, and was instrumental in the design and roll-out of DTSC's public participation program – a program that is still used by DTSC and RWQCBs today. Tracy is well-known and respected by managers at DTSC, various RWQCBs, and the EPA.

Craig Communications' eight-person staff have over 75 years of outreach experience in California, and have provided a variety of trainings on subjects such as conducting culturally relevant outreach in response to California's changing demographics; designing outreach programs that work for the Latino and Vietnamese population; how to use social media to engage the public in a meaningful manner; and the importance that trust and relationships play in risk communication.

Early identification of stakeholders, issues, and areas of concern are crucial to the success of any project. Craig Communications identifies stakeholders, assesses their concerns, and develops strategies to mitigate the risks of opposition.

Involving communities in projects that have the potential to impact them is critical to a project's success. Involving the community early and often – and sustaining public interest – is not easy, but Craig Communications is adept at dealing with environmental and social justice issues in a transparent and forthright fashion to garner community trust and support. This includes conducting relevant outreach to diverse populations, providing a variety of opportunities to solicit meaningful community input, and listening and acting on community concerns.

Craig Communications currently provides public participation support on 64 projects that are overseen and approved by DTSC and RWQCBs, as well as the EPA.

Engagement – City/County Staff and Appropriate Regulatory Agencies

Leslie Lukacs will also work with our Team's permitting and development specialists concerning discussions with City/County staff and regulatory state and local agencies. A detailed **Community Engagement Program** is provided in **Appendix I**.

Application for CEQA Review

After input is received on the Initial Study, Renewable Sonoma will prepare an Application for CEQA Review that will include substantial information on our Solution and its environmental impacts. Renewable Sonoma will work closely with the City/SCWMA and other consultants, as appropriate, to ensure our application is not returned for additional information or clarification.

Given the amount of preparation our team has performed on the project, dating back to 2014, we anticipate completing the Initial Study and submitting an Application for CEQA Review within 90 days of executing the Cornerstone Agreements (see below).

Assuming that the City/County as Lead Agency follows the CEQA mandated schedule for public notices and hearings, the entire CEQA process can realistically be completed in 12 to 18 months. For the purposes of the schedule presented below, we have used the more conservative 18 months. Unforeseen and unplanned for delays will be managed as skillfully and tactfully as possible. Our Permitting Manager, Pat Sullivan, is more than capable of advocating for SCWMA's best interests and communicating progress every step of the way.

Solid Waste Permitting

A Solid Waste Facility Permit (SWFP) will be required. Renewable Sonoma will prepare a SWFP application, closure/post-closure plans, Report of Facility Information [RFI], and Transfer Processing Report (TPR) for the composting, anaerobic digestion, and related operations, per Title 27 of the California Code of Regulations (CCR).

As noted previously, we have already developed a draft Odor Impact Minimization Plan (OIMP) for the composting facility, and if we are awarded the project our Team will develop an all-encompassing Operations Plan.

The permitting process will involve multiple agencies, including, but not limited to CalRecycle, including the Local Enforcement Agency (LEA), the County, BAAQMD and NCRWQCB CalRecycle will review the permit process conducted by the LEA for the Project. They will also review the TPR, RFI, and other plans and permit documents, and provide feedback to the LEA.

Renewable Sonoma team leaders, Leslie Lukacs and Will Bakx, have long-established and positive relationships with the LEA and CalRecycle staff, and are very familiar with the responsibilities, processes, and expectations of each agency. These well-established relationships will help expedite obtaining the Solid Waste Facility Permit.

Solid waste permitting work will also be performed concurrently with CEQA and CUP permitting work. However, final solid waste permits cannot be approved until the CEQA process is complete. **While processing can run concurrently with CUP processing, approval for solid waste operations, including from CalRecycle, will likely add 3 to 4 months to the 12 to 18 months expected to complete CEQA.**

Water Quality Permitting

Renewable Sonoma intends to design, build and operate our Solution as a Zero Discharge facility for wastewater. Our solution will require new Waste Discharge Requirements (WDRs) for the composting and AD operations (they have been required for similar projects in California recently). Moreover, the NRWQCB will likely receive copies of and be allowed to review the ERI, RFI, TPR, and closure and post-closure maintenance plans.

Compliance with the National Pollutant Discharge Elimination System (NPDES) storm water requirements will also be required. This will include preparing Notices of Intent (NOIs), Storm Water Pollution Prevention Plans (SWPPPs), Storm Water Monitoring Plans (SWMPs), and various other activities to comply with the State's General Permits for construction and industrial activities. These industrial storm water permitting activities would only be required prior to operation, while the construction permitting would be necessary prior to and during construction.

Our Team will prepare an application for WDRs, including Report of Waste Discharge (ROWD), and the various storm water permitting documents to complete the water quality permitting requirements with the NRWQCB. Our construction team will comply with all water use and water control regulations during construction.

SCS understands the importance of protecting water quality in the Laguna de Santa Rosa wetland complex and the Laguna de Santa Rosa watershed, which is part of the larger Russian River Watershed. SCS will adhere to all regulatory compliance under the State Water Resources Control Board Permits. This includes coverage under the National Pollutant Discharge Elimination System (NPDES) Construction General Permit (2009-0009-DWQ as amended by 2010-0014-DWQ) during the construction phases, and subsequent coverage under NPDES General Permit for Storm Water Discharges Associated with Industrial Activities (Order 2014-0057-DWQ) and the State Water Resources Control Board General Waste Discharge Requirements for Composting Operations (Order 2015-0121-DWQ).

One of the primary water quality goals during and post-construction of the Project will be to reuse, recycle, and redistribute storm water for efficient use of an extremely valuable resource. For the Project, SCS will also adhere to the guidelines of the Santa Rosa Area Standard Urban Storm Water Mitigation Plan (SUSMP) that was adopted by the North Coast Regional Water Quality Control Board (NSRWQCB).

Water quality permitting will include Permit Registration Documents (PRDs), Notices of Intent (NOIs), Storm Water Pollution Prevention Plans (SWPPPs), and Storm Water Monitoring Plans (SWMPs).

SCS will work to effectively transition the Project from the Construction General Permit (CGP) to Project areas covered under the Industrial General Permit (IGP), and the areas covered under the statewide Composting WDR. This will include the preparation of application(s) for WDRs, including Report of Waste Discharge (ROWD), and the various storm water permitting documents to complete the water quality permitting requirements with the SWRQCB and North Coast RWQCB.

Although we are proposing a Zero Discharge facility, negotiation and issuance of new/revised WDRs can still be slow and could potentially extend water permitting timeframes beyond what is anticipated. To mitigate this, pre-planning for WDRs will be performed and all agencies will be encouraged to coordinate with each other to expedite permitting. Renewable Sonoma will encourage that the entire permitting process will take place under the umbrella of AB 1045 to expedite all permit approvals.

Wastewater Permitting

Renewable Sonoma intends to design, build and operate the Project as a Zero Discharge facility for wastewater. **Since water will be recycled, reused, treated, and controlled on-site, a wastewater discharge permit may not be needed. Consequently, we do not believe an application for an industrial wastewater discharge permit will be needed to manage sanitary sewer disposal of aqueous waste streams generated by our operations. This will avoid the necessity of preparing an application for a source control permit and connection permit.**

Air Quality Permitting

Renewable Sonoma will obtain all necessary air quality permits, including for gas processing equipment, materials handling equipment, compost piles/vessels, AD vessels & flares, conveyors, screeners, etc. SCS has performed these services for similar facilities across California and throughout the nation, and has significant air permitting and compliance experience in the Bay Area Air Quality Management District (BAAQMD), including a strong working relationship with BAAQMD staff.

SCS will prepare all required air quality permit applications for composting and AD operations, as well as related facility elements, as detailed below. Our Team will work with SCWMA and the BAAQMD staff to develop the most flexible permitting strategy possible.

SCS has permitted six compost facilities in the BAAQMD and knows they will require a controlled composting operation. Sonoma Compost's proposed compost technology, CASP with biofilter or biocover, is considered BACT by BAAQMD and will meet or exceed BAAQMD air emissions and odor standards. It should be noted that the BAAQMD has stated that it intends to release a draft order to further regulate emissions from compost operations. It cannot be known at the time of this proposal whether or to what extent any new order from BAAQMD may affect the project.

All incoming organic materials will be processed in the receiving and separation building with negative air pressure. All prepared feedstock will be delivered to the digester in enclosed facilities and pipes, which will also meet BAAQMD standards.

These aspects of project permitting will require preparation of a BAAQMD Authority to Construct (ATC)/Permit to Operate (PTO) (and Title V, if triggered) application. This will include, but not be limited to: emissions calculations, control technology evaluations, evaluating offset requirements (if applicable), regulatory reviews, risk assessment, and development of permitting documentation (including BAAQMD ATC forms and PTO forms).

In general, these applications will require:

- Project/process description.
- Control technology description.
- Process flow diagram.
- Equipment list.
- Best available control technology (BACT) analysis.
- Completion of emission calculations, including new source review balance and project offset needs (if any).
- Completion of a toxics emission estimate and risk screening analysis for toxics in emissions.
- Preparation of BAAQMD forms.
- Calculation of permit application fee.

Pre-planning with BAAQMD will commence concurrently with pre-planning for the CEQA process. BAAQMD will participate in the EIR on air quality issues. The BAAQMD process can run concurrently with the CEQA process, but the BAAQMD requires CEQA approval before they will issue air quality permits. **Thus, there will likely be an additional 3 to 4 months of BAAQMD processing time following CEQA approval.**

Renewable Sonoma will encourage the entire permitting process to take place under the umbrella of AB 1045 to expedite all permit approvals.

Zoning/Land Use

Confirmation of zoning and land use requirements with the City/SCWMA will be completed at the same time as CEQA pre-planning.

Renewable Sonoma assumes that the City will have zoned the City Parcels appropriately for the desired solution and that only a Minor Conditional Use Permit (CUP) will be required. We further assume that zoning and CUP-related requirements will not preclude or substantially hinder the design, construction, and operation of our Solution.

The Renewable Sonoma team is well versed in the Conditional Use Permit (CUP) process. We intend to complete an application for a CUP, engage with appropriate City and SCWMA staff on specific issues that may arise, participate in the public hearing process, and otherwise facilitate the obtaining of a final CUP for the Project as expeditiously as possible.

The CUP process can run in parallel and in conjunction with the CEQA process. The CUP will include conditions related directly to the composting and anaerobic digestion operations and will incorporate mitigation measures and other limitations imposed through the CEQA process. **We anticipate the CUP being granted at the same time the EIR is certified.**

Endangered Species Mitigation

It is anticipated that mitigation for the endangered California tiger salamander (CTS) and possibly one or two endangered plants will be required.

CTS Mitigation

Renewable Sonoma has investigated the impact of CTS mitigation. Addendum 1 to the City's RFP gives an estimated cost of \$125,000 to \$150,000 per acre. Our proposal is based on the most conservative of those numbers: \$150,000 per acre. We are further informed that the City Parcels are in a location that requires mitigation of 2 acres for every acre of impacted area affected by the proposed organics processing facility. Therefore, the cost of CTS Mitigation for 13 acres of land use would be $\$150,000 \times 26 = \pm \$3,900,000$.

In addition, we are informed that there may be one or two endangered flowers/plants located on the City Parcels, which may add a few hundred thousand dollars to land use mitigation costs.

We are further informed that there could be delays outside our control in completing the necessary studies and activities needed to fully comply with endangered species mitigation measures before the City Parcels can be used.

Wiemeyer Ecological Sciences, Santa Rosa, CA

We intend to manage the CTS mitigation issue as skillfully as possible and have included former SCS staff member, Darren Wiemeyer, on our team for this express purpose.

Wiemeyer Ecological Sciences will assist our team by collaborating with the City's endangered species specialists to accomplish mitigation requirements as expeditiously as possible.

Based in Santa Rosa, Darren has owned his own consulting practice since 2007. He is a specialist in wetland delineations, biological studies, special-status species surveys and habitat assessments, habitat restoration and monitoring, mitigation and conservation banking, regulatory permitting and resource planning, biological construction monitoring, and storm water compliance. He has experience performing surveys and implementing mitigation measures for numerous wildlife species, including California tiger salamander (CTS). He also has experience with mitigation planning and regulatory consultation assistance for several federally listed plant and animal species. Darren Wiemeyer's resume is included in **Appendix E**.

Avoiding and Successfully Defending Against Litigation

As lead developer, Roy Alper has managed the permitting process for many development projects in the past 25 years; some larger, others smaller. Successfully managing this part

of a project's development requires integrating the work of engineers, architects, consultants, community organizers, attorneys and political experts, among others. Benefitting from this experience, Renewable Sonoma believes there are two basic principles to follow to avoid litigation in the permitting process:

1. Engage with the community pro-actively from start to conclusion of the permitting process.

Our plans for community engagement are discussed above. As is apparent from the multiple letters of support attached to this proposal, Renewable Sonoma has already begun its community engagement effort. While some companies are unknown to the Sonoma County community and others may appear distant or not paying attention, the Renewable Sonoma Team has been an integral part of Sonoma County's environmental and composting communities for decades and the Team members are widely appreciated for their work. *We believe this is a stand-out differentiator for our Team and a clear benefit for SCWMA.*

2. Prepare comprehensive applications for approvals, respond promptly to inquiries and have well-grounded supporting documentation.

In the permitting process, there is no substitute for doing it right the first time. If a mistake has been made, the best response is to acknowledge it and fix the issue. Ultimately the designs approved have to be built as approved and the project will have to perform in compliance with the conditions of approval. While some may try to skirt around issues or try to avoid them, that inevitably leads to constant conflict with regulators and the community. Those are all a distraction from the purpose at hand – responsibly managing SCWMA organics processing in accord with the agreements and conditions.

No matter how effectively these principles are followed, it is not always possible to avoid litigation or litigious political appeals. For example, there can be members of the community or groups to which the project is anathema. Or the project can become a political football in a campaign. Any experienced developer knows this kind of litigation is an inherent risk.

Our Lead Developer, Roy Alper, has an excellent track record in dealing with litigation. He brings this experience to Renewable Sonoma along with the strategies he has used to successfully defend against litigation when he has had to. The foundation of the success in litigation is the 2nd principle above – *do it right*. However, because this proposal will become a public document, Renewable Sonoma will reserve further discussion on other elements of litigation strategy until private meetings can be held with SCWMA management.

Pre-Construction Permits

Building Permits

Building permits will be required, as will other construction related permits, such as traffic management, erosion control, and fire marshal approval.

Barring significant opposition that threatens the viability of the project, Renewable Sonoma will begin Final Engineering a month or two before issuance of the CUP and CEQA approval. **We anticipate being able to submit plans for Plan Check within a month after issuance of the CUP and we anticipate 4-6 weeks processing time for Plan Check.**

Hazardous Material/Waste Permitting

Renewable Sonoma does not plan to store, use or produce hazardous materials as a component of our solution. However, we will apply for a hazardous waste storage and management permit to permit the possible generation of hazardous wastes.

We will complete a Hazardous Materials Disclosure, Inventory Statement, and Chemical Inventory and Business Emergency Plan (or an update to current site plans) for submittal to the local Fire Authority and/or local Certified Unified Program (CUPA). The CUPA in Sonoma County is the County's Hazardous Materials Unit. **Obtaining these permits will not delay construction, as they are needed prior to commencing operations, not construction.**

CalARP/RMP/OSHA/PSM Requirements

Our experience on other similar and related projects suggests it is possible that the biogas processing component of our solution will require compliance with the California Accidental Release Prevention (CalARP) program. This requires completing a hazard and operability (HAZOP) study and off-site consequence analysis (OCA), which would be completed through the California Office of Emergency Services (OES) and/or the local CUPA.

These efforts, with some updates, would also serve as compliance with the Risk Management Plan (RMP) and Occupational Safety and Health Administration (OSHA) process safety management (PSM) requirements, which are similar. The HAZOP study and OCA may be necessary to address CEQA issues related to these same areas of concern. SCS has substantial expertise in these issues and will ensure full compliance, as needed.

Obtaining these permits will not delay construction, as they are generally required prior to commencing operations. However, it is possible that they may be required for CEQA. We will determine if this is the case and incorporate this work into our efforts related to CEQA, as needed.

Design

Renewable Sonoma began Conceptual Design of our solution in mid-2016; our primary focus being to deliver as many Synergistic Use Opportunities to the City as we could identify, in the most beneficial way. Meetings with LTP management have greatly informed our Conceptual Design to this point. This proposal describes the very latest evolution of our Conceptual Design that addresses all requirements of the SCWMA RFP.

If Renewable Sonoma is awarded this project, our Conceptual Design will continue to be informed and shaped by ongoing discussions with City, LTP, and SCWMA management.

When the general configuration of our solution is settled and an Agreement has been executed, Renewable Sonoma will develop Preliminary Engineering drawings to 25% completion status. Preliminary Engineering Drawings are expected to take three months. While Preliminary Engineering is underway, Renewable Sonoma will start preparatory discussions with all agencies having discretionary jurisdiction over our solution.

At the conclusion of Preliminary Engineering, Renewable Sonoma will be able to firm-up budgetary costs used in Conceptual Design and use the Preliminary Design as the basis for proceeding with the Permitting process. During the Permitting process, it is expected that aspects of the Preliminary Design will need to be re-evaluated and possibly changed in response to requirements that may emerge.

Once the principal discretionary project approvals are obtained (e.g., EIR Certification, CUP) and conditions of approval are known, the Final Engineering process will begin. Final Engineering will form the basis for Renewable Sonoma's Engineering/Procurement/Construction ("EPC") Agreement with SCS Engineers, and SCS's related agreements with major subcontractors. These agreements will be required to conclude financing agreements for construction debt, mezzanine debt, and CPCFA bond sales that will capitalize delivery of our solution.

Upon completion of the commissioning process, Record Drawings will be prepared for the City/SCWMA.

Construction and Commissioning

SCS Energy will be responsible for construction and commissioning of our Team's solution. SCS Energy's philosophy is that construction should be under the control and direction of the responsible engineer, not a separate construction division. This philosophy ensures the facility is constructed in accordance with the intent of the design as developed by the responsible engineer, and has served SCS Energy's clients extremely well on numerous design-build waste-to-energy projects in California and many other states

Under the leadership of Procurement and Construction Manager, Bob Viers, SCS Energy will assign dedicated staff to perform the Construction and Commissioning of our Team's solution. These managers will have many years of experience in the construction and commissioning of plants of similar size and complexity.

Like most general contractors, SCS self-performs some construction activities and subcontracts for others. In business for 47 years, SCS thoroughly vets subcontractors to ensure they meet SCS's high standards for professionalism, quality, and safety.

Commissioning will be executed using SCS personnel as well as commissioning personnel from BIOFerm. SCS will use a systematic approach to commissioning, thoroughly checking the proper operation of each subsystem individually and then the facility as a whole. This ensures the safe and proper operation of each component of the facility and the facility, as a whole.

We expect to begin preliminary construction activities (ordering equipment, scheduling appointments, etc.) as early as it is prudent to do so. For example, it may make sense to begin these preliminary steps once CTS mitigation requirements are established even though the mitigation activity itself may take many more months. This would be an efficient way to manage the construction stage of the schedule.

Operation and Maintenance

Renewable Sonoma will be exclusively responsible for operating and maintaining the facility, including product marketing and sales. BIOFerm will support Renewable Sonoma in operating and maintaining the anaerobic digester and biogas conditioning facility. SCS will be responsible for all regulatory compliance.

Prevailing Wage

Renewable Sonoma embraces and will comply with all labor laws and regulations throughout the duration of the project, including Prevailing Wage laws.

B. SAFETY

The Renewable Sonoma solution will be fully staffed with well-qualified and fully trained personnel to ensure all operations are conducted in a safe and healthy manner, in accordance with the **Safety Plan** to be prepared by SCS. The **[Site Name TBD] Safety Plan** will be analogous to the **Safety Manual for the Composting and Mulching Industry** prepared by the University of Tennessee, Center for Industrial Services, a copy of which can be viewed by clicking [here](#).

As appropriate, Renewable Sonoma personnel will be fully trained in contamination and hazardous waste identification, handling, and disposal, as set forth in our Contamination and Hazardous Waste Protocols.

SCS operates an entire safety practice and has extensive experience in solid waste facility health and safety. In fact, SCS approaches every project with safety as the No. 1 priority and truly believes “Safety is a Value”. This daily commitment is evidenced by SCS’s competitive national Emergency Modification Rating (EMR) of 1.0.

All Renewable Sonoma Team members will embrace and commit to all aspects of our Safety Plan. And once our solution is operational and open to the public, on-site managers will pay close attention to safety at all times, *but especially in the first six months of operations to establish expectations and reinforce good, daily, matter-of-routine, safety habits.*

C. REPORTING

All incoming materials will be recorded at the gate house, with information including organics category, tonnage, place of origin, hauler, route number, etc. Materials billing will be performed based on this accounting. **A Sample Tonnage Report, Quarterly Report, and Annual Report** are provided in **Appendix R**.

Records will be kept of material shipped by Renewable Sonoma to the Central Disposal Site (gate receipt), recycling center (gate receipt or hauler bill), and any other third-party facilities.

Hazardous material disposed of will be tracked and reported.

A report will be generated monthly that summarizes:

- The volume of each category of organic materials received (see Sample Tonnage Report in **Appendix R**).
- The number of rejected loads and the provider of those loads.
- The number of partially contaminated loads and the provider of those loads.
- The volume of each category of residual non-organic materials and recyclables transported by Renewable Sonoma to the Central Disposal Site and other recycling facilities. (Tags received during each drop-off will serve as a cross-check for tracking volumes of non-organic materials received and re-distributed.)

Detailed reports will also be produced quarterly and annually, as required.

Any formal complaints will be included in the quarterly and annual reports.

All sales will be entered in a computerized tracking system capable of distinguishing different types of sales activity, including products, dates, taxes, and other relevant information. Selection of the best sales software will be made following further discussions with SCWMA staff in the project kick off meeting as to SCWMA's specific sales data requirements. *As with any private business, certain sales information will be proprietary and confidential.*

All reports will be provided to SCWMA and other required recipients in Excel format, unless otherwise agreed.

Following project award, Renewable Sonoma will work with SCWMA to fine-tune reporting specifics, including the what, when, where, and how of reporting (data, deadline, recipient, delivery format).

Dispute Resolution

Renewable Sonoma believes the best way to avoid disputes in an on-going business relationship is by keeping all communications channels open and sharing information transparently. To manage differences that may arise which indicate a more structured process may be appropriate, we propose a specific procedure to be included in the Agreement.

This procedure begins with a meet and confer process. If that is unsuccessful, the process would move to mediation. If mediation is not successful, the matter would go to binding arbitration. Either AAA or JAMS procedures are acceptable for the mediation and arbitration procedures.

Please see Section 6. Service Exceptions/Alternatives for the dispute resolution provisions for the Agreement. Also, please refer to the discussion below on Avoiding and Successfully Defending Against Litigation.

Avoiding and Successfully Defending Against Litigation

There are three principal areas of potential litigation during construction and operation of the project:

1. A possible permit violation.
2. A labor dispute.
3. An Agreement dispute.

Permit Violation

Renewable Sonoma is committed to constructing and operating the project in full compliance with all permits and approvals. If we violate a permit condition, it will be inadvertent, and we are committed to fixing the problem promptly when it is called to our attention. If we disagree with an allegation of permit violation and can factually support our position, we will work with the party making the allegation to reach common ground. Only in an extreme circumstance would Renewable Sonoma consider letting this type of a dispute lead to litigation. That type of situation would arise only if we had an exceptionally strong factual basis for our position that is highly likely to be upheld and the cost of changes being demanded is significantly out of balance with the cost and risk of litigation.

Labor Dispute

Renewable Sonoma believes that a company must honor and respect its employees in order to be successful in business. This is not just a slogan to put on the wall. **Sonoma Compost operated for 22 years at the Central Disposal Site without a single labor dispute and will bring the same operating practices to Renewable Sonoma.** We believe in compensating our employees fairly, at Prevailing Wage rates, in being honest with our employees, and in developing a committed team spirit among the people who will be working in often unpleasant conditions to help all the people of Sonoma County achieve landfill diversion and GHG emissions reduction goals.

Agreement Dispute

While we will be bound by contract, Renewable Sonoma, SCWMA and LTP will be partners in the business of diverting organics from landfills in a way that creates multiple Synergistic Use Opportunities. If an issue arises, the solution will be found by putting the situation on the table and finding the best way to work it out. That is the antitheses of litigation. We hope that SCWMA and LTP share this view. If a solution cannot be worked out informally, the Dispute Resolution process that we propose at Section 6: Service Exclusions/Alternatives begins with non-adversarial steps. The first step is to meet and confer; if that isn't successful, the next step is mediation. Only if mediation is unsuccessful would the last step be employed – binding arbitration. While binding arbitration is clearly adversarial in nature, it is less so and faster than litigation.

D. OPERATIONS

Please see Section A. Facility above for discussion of scale procedures, loading and turn-around time, tipping procedures for incoming loads, load check program, and fuel type used for onsite equipment.

Hours of Operation

The Renewable Sonoma solution will be open to receive and process organic materials and sell finished products 6 days per week, Monday through Saturday:

- General public hours: 7:00 am to 5:00 pm.
- Operational hours: 6:00 am to 6:00 pm.
- Emergency hours: 24/7/365.

The scale will be operational during the above hours. There will be one scale for inbound traffic and one for outbound.

No vehicles will transport organics to and from our site during evening and night hours.

If the City/SCWMA would like to suggest different operational hours, we would be pleased to receive and evaluate those suggestions.

Traffic Management

- The primary load check will take place at the scale and the driver will be directed to the drop-off location.
- Unless a load is contaminated, turnarounds times will typically be between 15 to 30 minutes. Sufficient staffing will be maintained to ensure traffic flows safely and quickly.
- Loads that exceed acceptable contamination levels will be rejected.
- Courteous explanations and helpful information on how to avoid future rejections will be provided to drivers.
- Partially contaminated but acceptable loads will be weighed with non-organic residual materials to establish accurate net volumes of organics.
- A tag will be issued with the date, origin of load, route number (if applicable), gross weight, type of material, and method of payment (agency, cash, credit, etc.). A copy of the tag will be provided to the driver.
- The tag will be verified and signed off at the tipping floor for acceptance of the load.
- As vehicles leave the site, a tag with the vehicle's net weight will be produced.

Fuel Used On Site

See below under E. Sustainability.

Tipping Procedures

See above under A. Facility.

Load Checking Program

See above under A. Facility.

E. SUSTAINABILITY

Minimizing Equipment Emissions

- The CASP system is powered by electricity. Emissions are approximately 80% less than open windrow composting.
- All stationary equipment is powered by electricity.
- Fuel-powered non-stationary (rolling) equipment will use diesel fuel.
- If feasible, solar panels will be installed on the receiving building to offset electricity costs. (Subject to final costs and contract negotiations.)

Maximizing Methane Recovery

The diversion of organics from landfills significantly reduces landfill methane emissions – a major objective of international, California and Sonoma County local governments. The Renewable Sonoma project will reduce GHG emissions by nearly 24,000 MT/yr. CO₂e – comparable to removing about 5,000 cars from the roads.

The anaerobic digestion system is included in the project for the specific purpose of maximizing the production and beneficial re-use of methane in organic materials.

The reverse aeration CASP system we propose is highly effective in maintaining an even oxygenated compost process, which minimizes methane production during the composting process.

Minimizing Unprocessed Organics

SCWMA and its member agencies have statutory mandates and local goals to divert at least 75% of discarded organics from landfills. As discussed previously in this proposal, the fundamental premises of the Renewable Sonoma project are to:

- Size the project to accept the volume of organics that will be delivered when State and local mandates and goals are met.
- Implement an extensive Community Engagement Program, in conjunction with SCWMA, its member agencies, county haulers, and community organizations, to

reach that mandated volume as quickly as possible without compromising product quality.

- Simultaneously:
 - Restore the availability of Sonoma Compost's high quality, locally produced mix of compost products for the many different communities in Sonoma County
 - Produce needed biogas and additional energy storage for the LTP.
 - Provide a wide range of Synergistic Use Opportunities for LTP, SCWMA, and its Member agencies.

To the extent the entire community, working together, can divert an even higher percentage of organics from landfill to the project, Renewable Sonoma will have the capacity to process them consistent with the above premises.

Purchasing Energy from Renewable Sources and Using Carbon Credits

The project has negative carbon footprint, so there is no need to purchase carbon credits. Our plan includes purchasing zero carbon energy from Sonoma Clean Power for plant operations. Renewable Sonoma intends to explore installing a solar PV system over the storm water pond and other parts of the facility to offset electricity purchases. We intend to evaluate and use, if at all possible, natural gas, Renewable Natural Gas or biodiesel for rolling equipment to further reduce the carbon footprint of the project.

Environmental Stewardship

SCS Zero Waste Director, Leslie Lukacs will design and lead the implementation of a comprehensive Zero Waste Plan for our solution. SCWMA staff will have an opportunity to review and contribute to the final design of this plan. Some of the major components are noted below.

Design

- The safety, reliability, effectiveness, and durability of all systems and equipment are of the utmost importance. Whenever feasible, plans and drawings will consider the appropriateness of using recycled or reused materials, solar panels, and other environmentally friendly materials and energy sources (e.g. compost, LED lighting, etc.).
- Drought-tolerant landscaping will be incorporated into site design aesthetics.

Construction

- Recycled water from the LTP and other on-site water resource conservation activities will be used during construction activities whenever feasible.
- Construction debris will be recycled and reused whenever feasible (e.g., landscaping, road cover, etc.).
- Recycled steel, concrete and other materials will be used wherever possible.

Operations

- A blue (recyclables), green (organics), black (landfill) waste collection system will be employed in offices, employee break rooms, and in other strategic locations on site.
- Signage in English and Spanish will be clearly visible to employees and visitors.
- Recycled water from the LTP and other on-site water resource conservation activities will be used during site maintenance activities whenever feasible (landscaping, cleaning, etc.).

Net Energy Use

Gross parasitic electricity consumption is estimated to be just over 3,000 MWh/year. As described above, we intend to purchase zero GHG electricity from Sonoma Clean Power for this consumption.

We will consider, during the preliminary design stage, whether it would be economical to install solar PV in several areas of the project to displace most or all of this electricity. Such locations would include, among others, the roof of the Materials Receiving and Processing Building, over the stormwater pond and over the biofilters. Our preliminary evaluation of solar PV suggests it will be cost-effective to install such a system.

All biogas produced from the digesters will be delivered to LTP after conditioning for use in the existing LTP generators.

We estimate that 45,000 gallons per year of diesel or diesel equivalent will be used to fuel rolling equipment. As mentioned above, we will consider alternatives to petroleum-derived diesel fuel such as natural gas, Renewable Natural Gas and biodiesel. Using an alternative to petroleum-derived diesel will further reduce the carbon footprint of the project.

Use of Local Vendors

- During 22 years of operations at the Central Disposal Site, Sonoma Compost always shopped local, whenever possible. This commitment has continued in the past two years and will continue before, during, and after construction of our solution.
- We will hire employees to staff our new business from the local community, including potentially re-hiring former Sonoma Compost staff that had to be let go following loss of our contract with SCWMA in late-2015.
- We will give work to local tradesmen and purchase from local family operated machine shops, hydraulic and fuel supply stores, irrigation supplies stores, etc., as needed.

Green Innovations and Initiatives

Food Recovery

- Renewable Sonoma will boost food recovery efforts in Sonoma County. One way this might be best implemented is to sponsor an annual contest or offer an annual grant to help non-profits or businesses already operating in this arena. We are not sure exactly how much we will have in our budget, but we expect to be able to devote approximately \$25,000 a year to this initiative.
- Primary considerations will include:
 - Collaborating with SCWMA and other stakeholders to develop this initiative, so each dollar can be used as wisely and effectively as possible.
 - Increasing the diversion of organic materials away from landfills.
 - Awareness, education and outreach.
 - Reliable and quantifiable program tracking.

Soil Health and Carbon Farming/Gardening Leadership Program

Renewable Sonoma will be a leader in promoting and encouraging soil health and carbon farming/gardening throughout Sonoma County. This will be accomplished by establishing a program specific to this initiative. Some key elements of the program are noted below.

- Hosting workshops.
- Making presentations.
- Assisting other experts in the region to develop/expand carbon farming plans, etc.
- Providing written materials and videos on the Renewable Sonoma web site and in our on-site retail store.

Carbon Farming is one of the few options available to reverse global warming in an affordable way. By taking excess carbon out of the atmosphere and locking it into the soil or plant biomass, carbon farming aids the growth of plants, conserves water, reduces erosion, improves soil structure, reduces the need for fertilizer and pesticides, and improves local air quality.

Sonoma Compost co-owners, Will Bakx and Alan Siegle have many years of expertise and experience in this specialized field, including offering workshops and training.

Compost Give Away Program

Renewable Sonoma will offer a compost give-away program. There will be two aspects to the program:

1. Bags of compost will be given away at farmers markets and special events (consumers will be encouraged to bring their own bags/containers).

2. The School and Community Gardens Donation Program successfully managed by Sonoma Compost for over 20 years will continue under the Renewable Sonoma brand. Schools will have to demonstrate that the use of compost and mulches is used in an educational manner to teach about soil health, carbon farming, sustainable agriculture, etc.

Microgrid Project

There are many Synergistic Use Opportunities from locating the Renewable Sonoma project at LTP, including enhancing the pioneering Microgrid project being developed at LTP. Simply stated, a microgrid involves subdividing the electrical grid into smaller, more self-sustaining areas where electric generation and consumption can be better managed locally, with the larger electric grid serving as a back-up rather than primary source. It is the opposite of the current system where the larger grid is the primary source and local users can install their own generators as backup. Microgrids are increasingly being considered an important way to increase system resiliency in response to climate change. They are also envisioned to gradually replace reliance on large central generating stations fueled by coal, gas or nuclear energy, such as Diablo Canyon, that are being retired as they reach the end of their useful lives.

The LTP Microgrid project is one of three projects being funded, in part, by the California Energy Commission to evaluate the performance of microgrid projects. It is the only one of the three to be located at a waste water treatment plant. For a number of reasons, waste water treatment plants are ideal locations for future microgrid projects in every community and the LTP Microgrid project is positioned to become a leader, not only in California, but for the entire country and beyond.

The Renewable Sonoma project will improve the performance of the LTP Microgrid project in several ways, including, but not limited to:

- Increasing the demand response capability of the LTP Microgrid project by adding energy storage to batteries already planned in the project,
- Displacing use of natural gas in one of the LTP generators, reducing the GHG emissions from the project and
- Possibly displacing installation of a costly Selective Catalytic Reduction system for one of the LTP generators.

We have been engaged in multiple discussions with LTP management regarding these synergistic opportunities until the issuance of their RFP, and they are a key part of our proposal to the City and this proposal to SCWMA.

5. FORMS

Forms A, B, C, D, E, F, and G are provided in **Appendix S**.

- Form A – (4 pages).
- Form B – (2 pages).
- Form C – (1 page).
- Form D – Including notary acknowledgment (2 pages).
- Form E – (2 pages).
- Form F – (1 page).
- Form G – (2 pages).

NOTES:

1. *As required, all Forms are included with the seven hard copies.*
2. *Form F only has also been submitted separately on a USB-compatible flash drive (in Excel format). This flash drive is included in the same box that the seven hard copies will be delivered in.*
3. *As further required and clarified in SCWMA's answers to bidders' questions provided in Addendum No. 4, a full copy of our proposal, EXCLUDING ALL REFERENCES TO COSTS, has also been submitted on a separate flash drive. This flash drive is also included in the same box that the seven hard copies will be delivered in.*

6. SERVICE EXCEPTIONS/ALTERNATIVES

Renewable Sonoma has reviewed SCWMA's Draft Agreement for Organic Materials Processing Services (RFP Attachment B – Long-Term Agreement) and would be pleased to enter into such an agreement with SCWMA.

If this project is awarded to Renewable Sonoma, we would, however, appreciate the opportunity to discuss possible re-wording of the below-referenced provisions. We fully expect to reach consensus on the below requests quickly and efficiently. The Draft Agreement page number, line number, and paragraph number are provided for each of our discussion requests.

ALTERNATIVE LANGUAGE

P. 9, L. 338-9, ¶ 3.01.2

Renewable Sonoma accepts that SCWMA will not guarantee any minimum amount of organic material will be delivered to the project, but it will be essential that SCWMA and its member agencies commit to deliver to the project all acceptable organic material collected in their respective jurisdictions by their haulers and from their generators, including Commercial Food Waste as provided in paragraph 9.7 of the Master Operating Agreement between the County and Republic Services and similar provisions in the municipal hauling agreements.

P. 9, L. 354-8, ¶ 3.02.5.1

This paragraph states, in summary, that the facility has to operate so the maximum amount of "Residual" is 10% and has to pay liquidated damages above that. Contractor is also obligated to pay to dispose of Residual at the Central Disposal Site. We request clarification that the term "Residuals" in paragraph 3.02.5.1 specifically excludes recyclable materials, which we intend to sort and send out for recycling.

We also request a change in the requirement that Contractor must pay to dispose of Residual at the Central Disposal Site. Renewable Sonoma respectfully suggests that this is a direct disincentive to achieving one of the most important goals of the SCWMA – the production of high quality compost. The highest quality compost will have the lowest quantity of contaminants. Yet the more successful Renewable Sonoma is in removing contaminants from the organics stream, the higher the cost of disposal would be imposed. Our Solution is based on the premise that the SCWMA will recognize this disincentive and will agree to treat the cost of disposal at the landfill as a pass-through expense to the SCWMA.

Of course, the most important measures to minimize contamination will be taken by residential and commercial generators. Consequently, our Community Engagement Program is targeted towards helping the Sonoma community understand the importance of reducing contamination at source, and explaining how to do this.

This would be consistent, in our view, with the position in paragraph 3.08.1 which states: "Any load containing in excess of [Contractor's proposed] Contamination threshold shall be

classified as Solid Waste and loaded onto the Transfer Company or Collections Company's vehicles for backhaul to the Central Disposal Site at no cost to Contractor." [Emphasis added.] This is also consistent with paragraph 3.08.2 which states, in summary, that if a contaminated load is salvageable, SCWMA can ask the Contractor to sort it to an acceptable level of contamination and will reimburse the contractor for time and materials to do that.

P. 9, L. 362-3, ¶ 3.02.7

Renewable Sonoma accepts that the SCWMA may request our "full list of customers/brokers/buyers who buy finished product (material market outlets)." **This is valuable proprietary information;** therefore, we will require a provision that the SCWMA, its member agencies and any party with whom it shares this information must treat this information as a trade secret and keep it confidential.

P. 12, L. 465-74, ¶ 3.06

Renewable Sonoma accepts the 30-minute turn-around requirement but requests an exception for those vehicles with contaminated loads that require additional inspection, sorting or reloading. Those vehicles should not be included in the monthly count that would result in liquidated damages if more than 5 trucks do not meet the 30-minute standard.

P. 18, L. 631-4, ¶ 4.05

The "Special Rate Adjustments" provision is limited to: "1) any increase in Governmental Fees outside of Contractor's control and 2) any change in Applicable Law." Renewable Sonoma accepts this provision but believes it does not adequately address the many kinds of changed circumstances that would cause the SCWMA, as well as the Contractor, to want to consider changes to the Agreement.

Technology is evolving at an unprecedented pace and could cause parts of the Technical Proposal attached to the Agreement to become outdated long before the end of the 20-year term. Further, each new extreme weather event provides further motivation for stronger actions to reduce greenhouse gas emissions. Private actors, from individual households to the largest companies and particularly insurance companies, are increasingly aware of the problem and are taking actions on their own initiative. Government actors may impose fees or change laws that do not directly affect the Project itself, but can have a significant indirect impact on the Project. Consider just a few hypothetical examples:

- Suppose, in the 3rd contract year, CARB & BAAQMD determine that insufficient progress is being made in reducing GHG emissions from agricultural wastes (methane production, burning); they begin to impose steep fees on producers of these wastes. This causes immediate demand to increase the size of the AD and compost facilities in Sonoma County, which must be approved, constructed and operated without interrupting operation of the existing facilities. This requires a contract extension and establishment of appropriate tip fees for the new material being delivered to the Project.
- Suppose, in the 5th contract year, Artificial Intelligence has advanced to clean feedstock in a way that outperforms labor. A significant investment has to be made to install the AI sort line and provide responsible severance and retraining benefits to

the sort line workers who would be laid off. The tip fee could be reduced by 15% but the contract term would have to be extended by 5 years to amortize the capital cost.

- Suppose, in the 7th contract year, packaging made of compostable molded fungi becomes ubiquitous in California, causing a substantial increase in the volume of compostable organic materials. The compost facility has to be expanded to handle the increased volume. This requires a contract extension or a change of tip fee or both.

Renewable Sonoma respectfully requests that a provision be added to the Agreement that would allow the Contractor and/or the SCWMA to propose changes to the facility and/or terms of the Agreement to accommodate these types of changes and that would allow the SCWMA and Contractor to negotiate in good faith to mutually acceptable outcomes. In our view, it is equally important to the SCWMA and Contractor that the facility and contract be adaptable to accommodate changes to avoid situations in which the facility is unable to meet new community needs or challenges or is unable to adopt new technology simply because a contract signed in 2018 does not allow changes for reasons not then foreseen. By requiring that any change be by mutual agreement would assure that the interests of both the SCWMA and Contractor are protected.

P. 24, L. 896-9, ¶ 7.05

This paragraph states: “SCWMA reserves the right to terminate processing services of segregated Commercial Food Scraps only with written notice to the Contractor of no less than ninety (90) days.” We note that the Draft Agreement identifies this provision as “subject to modification based on selected contractor’s proposal.” Commercial Food Scraps are a major contributor to methane emissions from landfills and there is currently a very low rate of collection of Commercial Food Scraps in Sonoma County. Renewable Sonoma’s community engagement program places a high priority on significantly increasing the percentage of Source Separated Commercial Food Scraps so the County can meet its statutory obligations and local goals. Commercial Food Scraps are an important feedstock for the Renewable Sonoma project and we will ask the SCWMA and its member agencies to direct that Commercial Food Scraps in their jurisdiction be delivered to the Project.

In our opinion, these requested changes clarify and add important detail to the respective provisions without materially changing the intended meaning. This mutually benefits all parties.

In addition to these suggested modifications to the Draft Agreement, we propose adding the below language to the Agreement regarding resolution of disputes, consistent with the discussion on Page 108 of our proposal.

ARTICLE [xx] DISPUTE RESOLUTION

xx.1 Meet and Confer: In the event of any dispute arising out of or relating to this Agreement, the parties to the dispute shall meet and confer in good faith within two (2) business days after the event or circumstance giving rise to the dispute.

xx.2 Mediation: In the event meeting and conferring on a dispute fails to resolve the dispute, the parties shall immediately submit the dispute (“Dispute”) to mediation before a neutral independent mediator, at a location in Sonoma County (unless otherwise agreed by the parties). In the event that the parties cannot agree upon a mediator within thirty (30) days of the Dispute being submitted to mediation (“Selection Period”), then each party to the dispute shall select a mediator no later than ten (10) days after the end of the Selection Period and the selected mediators shall select a mediator for the Dispute. The costs of mediation shall be shared equally by the Members. Unless another time period is agreed upon by the parties, mediation shall take place no more than forty-five days (45) after the date of a demand for mediation.

xx.3 Arbitration: In the event that mediation does not resolve the Dispute, the parties agree to submit any Dispute not resolved through mediation to binding arbitration before a single arbitrator under the American Arbitration Association's Commercial Rules. The parties shall cause the arbitration process to commence within ten (10) business days after completion of an unsuccessful mediation.

If the parties to the dispute cannot agree upon an arbitrator, then any party to the dispute may file a petition in Superior Court of Sonoma County to have an arbitrator appointed. The arbitrator shall have jurisdiction to grant all legal, equitable and injunctive relief. The Arbitrator shall provide a reasoned decision, and such decision shall be final and binding upon the parties. The arbitration hearing shall commence within 45 days after commencement of the arbitration process.

Costs of arbitration shall be allocated equally among the parties. The prevailing party shall be awarded reasonable attorney fees and costs. The prevailing party shall be awarded reasonable attorney fees and costs, except that a party that has failed in good faith to meet and confer with respect to a dispute and/or mediate a dispute, shall not be entitled to an award of attorney fees and costs even if that party is determined to be the prevailing party in the arbitration.

ASSUMPTIONS AND UNDERLYING PREMISES FOR THIS PROPOSAL

Feedstock

SCWMA has not provided a volume or characterization of the feedstock it will direct to be delivered to the organics processing facility. Therefore, we have made certain assumptions as to the volume and characterization of the feedstock, upon which our proposal is based.

These assumptions are discussed below.

Franchised Green Waste and Self-Haul

The RFP states that 66,570 tpy of franchised green waste, comingled with residential food scraps were collected in the Agency service territory in 2016. Addendum #1 to the RFP states that approximately 75,000 tpy of organic materials are being shipped from transfer stations in the County to compost facilities located outside the County. We assume that this

75,000 tpy of organics includes approximately 66,000 tpy of franchised green waste and approximately 9,000 tpy of self-haul organics.

Renewable Sonoma further presumes that the SCWMA and its members are fully committed to obtaining maximum benefits from the residential organics collected by franchised haulers and that they all will direct their respective haulers to deliver these materials to the project. We understand that SCWMA does not control self-haul organics.

Residential Food Scraps

The RFP further states that there are an estimated 19,425 tpy of residential food scraps being taken to the landfill. The Renewable Sonoma solution includes an ambitious and on-going Community Engagement Program with residential generators to redirect these food scraps to the project. This program will be developed and undertaken in cooperation with the SCWMA, the SCWMA's participant jurisdictions and all relevant haulers. We encourage SCWMA and haulers to work with Renewable Sonoma to commence maximizing the residential food scrap diversion now in order to have a high rate of diversion in place at the start of the Agreement. We presume that the diversion program will, over time, be successful in redirecting at least 75% of these food scraps to the project as required by AB 1383. Achieving this level of success will require the full cooperation of all government entities, haulers and operators in the County, which we presume will be forthcoming.

Commercial Food Scraps

The RFP further states that there are an estimated 27,634 tpy of commercial food scraps being taken to the landfill. Renewable Sonoma's Community Engagement Program also includes engagement with commercial generators to redirect these food scraps to the project. We presume that this program will, over time, be successful in redirecting at least 75% of these food scraps to the project. Achieving this level of success will require the full cooperation of all government entities, haulers and operators in the County, which we presume will be forthcoming, including having the SCWMA and each of the SCWMA's participant jurisdictions direct that all commercial food scraps be delivered to the project and not to the landfill or other destination.

Feedstock Characterization

The RFP does not provide a characterization of the organics stream that will be delivered to the project. It goes without saying that the nature of what comes into the project directly affects the cost to process the material and both the quality and volume of the products the project will produce.

Our Technical Proposal includes a Feedstock Characterization on which we have based our tip fee proposal. Renewable Sonoma believes the Feedstock Characterization is reasonable based on the extensive experience of its team members in evaluating streams of organic materials in many U.S. jurisdictions, including, specifically, the experience of Sonoma Compost and SCS in Sonoma County.

Our proposal includes a budget to conduct a waste characterization study after Renewable Sonoma is selected by the SCWMA to determine whether there is a material difference between our assumed characterization and the actual characterization of the organics stream and, if so, to make necessary adjustments, up or down, in our proposed tip fee. Furthermore, if the volume of feedstock that SCWMA directs to be delivered to the project differs materially from the volumes assumed in our proposal, Renewable Sonoma costs may change and the tip fee proposed in this proposal may need to be adjusted accordingly.

Permitting Schedule

It is not yet known which agency will be the Lead Agency for purposes of the project's CEQA approval process. Regardless of which agency that may be, the Renewable Sonoma proposal assumes that the Lead Agency will be highly motivated to conduct an appropriately thorough but expeditious review of the project so Sonoma County, its cities and their residents and businesses can begin to receive the multiple economic and environmental benefits of the Project as quickly as possible. To this end, Renewable Sonoma commits to submit comprehensive and timely information about the project to the EIR consultant and presumes that:

1. The Lead Agency will direct its EIR consultant to produce equally comprehensive and timely Draft EIR and Final EIR documents on a time line consistent with the Permit Streamlining Act and A.B. 1045.
2. The Lead Agency will issue required notices and conduct hearings on a schedule consistent with the Permit Streamlining Act and A.B. 1045.

Renewable Sonoma further assumes that City of Santa Rosa or Sonoma County, as appropriate, will conduct a thorough but expeditious consideration of the requisite Use Permit for the project and will issue an acceptable Use Permit for the project no more than nine (9) months after Renewable Sonoma applies for it.

Renewable Sonoma's project development schedule and development budget are based on these assumptions and would necessarily have to be changed if the approval process extends, in a material way, beyond what is envisioned in the Permit Streamlining Act and the Use Permit schedule.

Integration with Laguna Treatment Plant

Renewable Sonoma is one of four companies that received a Letter of Intent to Negotiate from the City of Santa Rosa to site the project on City parcels. Our proposal to the City included a solution similar to that proposed to the SCWMA herein, with refinements to reflect more advanced engineering.

Our proposal to the City also included a "Preferred Option" that would entail integrating LTP's existing biosolids composting operation with Renewable Sonoma's composting operation and locating part or all of the Renewable Sonoma solution on existing LTP biosolids composting property. This would greatly increase the Synergistic Use Opportunities our solution can provide to the LTP, including but not limited to integrating millions of dollars

of capital improvements to LTP into the Renewable Sonoma financing plan, establishing a more comprehensive marketing program that would enhance the market perception of biosolids compost, and highlighting the LTP plant as a sustainable recycling facility. It may also create the opportunity to reduce CTS mitigation costs, which account for over \$4/ton of our proposed tipping fee.

Renewable Sonoma has been informed that the City will not entertain further discussion regarding the Preferred Option unless and until our proposal has been selected by SCWMA. While the Preferred Option would be significantly different from the solution proposed herein, Renewable Sonoma commits that this would not necessitate a change in terms to SCWMA that are proposed in this proposal.

Financing

The recently passed law making many changes to business and personal taxes includes several provisions that directly affect investments and lending to major capital projects such as the project. The law is just a few weeks old at the time this proposal is being submitted and the changes are too significant to fully evaluate how they may affect Renewable Sonoma's financing plan. The general sense, however, is that the changes appear most likely to have a positive impact and may create new financial structures that may benefit the project.

7. APPENDICES

- A. Acknowledgment of Receipt of Addenda
- B. Renewable Sonoma Letters of Support
- C. City of Santa Rosa Letter of Intent
- D. Renewable Sonoma Operating Agreement
- E. Resumes
- F. SCS Engineers - Additional Qualifications
- G. Sonoma Compost – Notice of Violations
- H. Financing Letters of Intent & Support, Resolutions, Business Tax Returns & Audited Financial Statements.
- I. Community Engagement Program
- J. Contaminant and Hazardous Waste Management Protocols
- K. ECS Information on Composting Facility Design and Odor Control
- L. Odor Impact Minimization Plan
- M. Product Quality Specifications
- N. Marketing Plan
- O. Noise Management Plan
- P. Fire Prevention and Extinguishing Plan
- Q. Carbon Savings Calculations
- R. Sample Tonnage, Quarterly, and Annual Reports
- S. Forms

A: Acknowledgment of Receipt of Addenda

**Sonoma County Waste Management Agency
Request for Proposals for Organic Materials Processing Services**

Addendum No. 1

Issued – July 7, 2017

THEREFORE: All Applicants are required to sign this page of this Addendum No. 1, and shall submit a signed copy of this page with their Proposal package.

Thank you for your participation,


Sonoma County Waste Management Agency
Patrick Carter
Executive Director

ADDENDUM NO. 1 DATE: July 7, 2017

COMPANY / AGENCY NAME: Renewable Sonoma, LLC

COMPANY ADDRESS: 10 Fourth St. Petaluma, CA 94952

REPRESENTATIVE'S NAME: Will Bakx

SIGNATURE: 

DATE: 1-8-18

**Sonoma County Waste Management Agency
Request for Proposals for Organic Materials Processing Services**

Addendum No. 2


Issued – July 27, 2017

All Applicants are required to sign this page of this Addendum No. 2, and shall submit a signed copy of this page with their Proposal package.

Thank you for your participation,

Sonoma County Waste Management Agency
Patrick Carter
Executive Director

ADDENDUM NO. 2 DATE: July 27, 2017

COMPANY / AGENCY NAME: Renewable Sonoma, LLC
COMPANY ADDRESS: 10 Fourth St. Petaluma CA 94952
REPRESENTATIVE'S NAME: Will Baker
SIGNATURE: 
DATE: 1-8-18

**Sonoma County Waste Management Agency
Request for Proposals for Organic Materials Processing Services**

Addendum No. 3

Issued –September 22, 2017

All Applicants are required to sign this page of this Addendum No. 3, and shall submit a signed copy of this page with their Proposal package.

Thank you for your participation,


Sonoma County Waste Management Agency
Patrick Carter
Executive Director

ADDENDUM NO. 3 DATE: September 22, 2017

COMPANY / AGENCY NAME: Renewable Sonoma, LLC

COMPANY ADDRESS: 10 Fourth St. Petaluma CA 94952

REPRESENTATIVE'S NAME: Will Bahx

SIGNATURE: 

DATE: 1-8-18

**Sonoma County Waste Management Agency
Request for Proposals for Organic Materials Processing Services**

Addendum No. 4

Issued –November 21, 2017

All Applicants are required to sign this page of this Addendum No. 4, and shall submit a signed copy of this page with their Proposal package.

Thank you for your participation,

**Sonoma County Waste Management Agency
Patrick Carter
Executive Director**

ADDENDUM NO. 4 DATE: November 21, 2017

COMPANY / AGENCY NAME:

Renewable Sonoma, LLC

COMPANY ADDRESS:

10 Fourth St, Petaluma CA 94952

REPRESENTATIVE'S NAME:

Will Baker

SIGNATURE:



DATE:

1-8-18

B: Renewable Sonoma Letters of Support



Steering
Committee

350Sonoma.org
350SonomaCounty@gmail.com

Dena Allen
Sunny Galbraith
Christine Hoex
Anna Jacopetti
Laura Neish
Darcy Sweeney

December 26, 2017

To: Sonoma County Waste Management Agency

Re: Renewable Sonoma Application for Compost Operation

The best news we have heard in this most challenging of holiday seasons is Renewable Sonoma's plan for a local compost facility. If this plan goes through, our precious green waste will no longer be trucked (at taxpayer expense) to out-of-county waste facilities. Once again, we will have a state-of-the-art compost facility that will supply high quality compost for local gardens, farms and vineyards. Rich, well prepared compost is also the black gold of our fire recovery process, regenerating soils, breaking down toxic materials and restoring microbial life.

We were fortunate for many years to have Sonoma Compost, which is partnering now with reBio, BioFerm and SCS Engineers, to propose a new facility on city-owned land adjacent to the Laguna Treatment site. This initiative includes Will Bakx, soil scientist at Sonoma Compost and local hero. Will's commitment to our county and his expertise in composting is unquestioned. He has volunteered endless hours to help the fire recovery teams prepare wattles to protect our watersheds from toxic runoff. His experience and knowledge have been lightening rods for innovative processes to break down toxins on the fire sites. We cannot imagine a better or more experienced leader and group of people to take on this project.

We urge you to accept Renewable Sonoma's proposal to build a newer and better compost facility contiguous to the Laguna Treatment site, an excellent central location for distribution. This is the best investment that our county can make. Please expedite this application process. The sooner we have local compost again, the better for all of us!

Thank you for your consideration,

A handwritten signature in cursive script, reading 'Anna Jacopetti for'. The signature is written in dark ink and is positioned above the typed name.

The Steering Committee of 350 Sonoma (350Sonoma.org)

Carbon Cycle Institute

Date: December 26, 2017

Re: Letter of Support for **Renewable Sonoma**

To Whom It May Concern:

The mission of the Carbon Cycle Institute (CCI) is to stop and reverse climate change by advancing science-based solutions that reduce atmospheric carbon while promoting environmental stewardship, social equity and economic sustainability. The Carbon Cycle Institute (CCI) is advancing this mission through our Agricultural Carbon Program, which promotes carbon farming, a land management strategy that builds soil carbon and critical ecosystem services on ranches, farms and working landscapes.

CCI is excited to learn that **Sonoma Compost** has partnered with **reBio**, **BIOFerm** and **SCS Engineers** on a proposal to the Sonoma County Waste Management Agency, under the auspices of **Renewable Sonoma**, to handle the organic waste stream in Sonoma County. The proposed solution will also generate renewable energy and offers additional benefits to other municipal operations. The City of Santa Rosa has issued a Notice of Intent to Negotiate with **Renewable Sonoma** to use a City-owned site adjacent to the Laguna Treatment Plant.

The loss of Sonoma County's premier composting facility, Sonoma Compost, two years ago has undermined both the County's capacity to deal responsibly with its organic waste stream and its ability to deploy one of the most effective tools available in the struggle against climate change. At precisely the moment that the critical role of soils and soil carbon sequestration was being recognized globally via the French Ministry of Agriculture's Four per Mille (4 per 1000) Initiative, Sonoma County elected to eliminate its principal tool for engaging with that potential. As a consequence of this ill-advised decision, Sonoma County is today out-hauling its organic materials picked up at the curb or dropped off at the county landfill and transfer stations. Out-hauling adds unnecessary costs to ratepayers and significantly increases the County's greenhouse gas emissions, while "passing the buck" on dealing responsibly with our own organic materials. It also strips our county of the significant soil nutrient and carbon resources embodied in those organic waste materials, and renders them effectively unavailable for reuse and recycling in our local agricultural and horticultural soil systems, driving soil degradation and driving the increased use of climate-forcing petrochemical fertilizers.

The significance of this flawed policy has been brought home by the recent fires devastating our region. The need for post-fire soil remediation has highlighted the

245 Kentucky Street, Suite A Petaluma, CA 94952

Phone: (707)338-4466

Email: jcreque@carboncycle.org

www.carboncycle.org

Carbon Cycle Institute

need for a local source of high quality compost, while the urgency of an effective climate change response has been made real and immediate.

There are many synergies resulting from the use of the Laguna Treatment Plant site for the proposed facility, including:

- >Out-hauling of green can curbside collections from Sonoma County will stop.
- >High quality compost and mulches at affordable prices will once again be available to the local public.
- >The central location of the Laguna Treatment Plant offers ease of access to Sonoma County residents and business.
- >**Renewable Sonoma's** project offers multiple synergies to the Laguna Treatment Plant site.
- >**Renewable Sonoma** has a strong environmental ethic and will develop a state of the art facility that will meet or exceed all relevant air, odor and water quality regulations.

CCI strongly urges acceptance of the **Renewable Sonoma** proposal by the County Waste Management Agency for implementation of a high quality compost and energy recovery system that will close the loop on organics processing and recycling in Sonoma County and contribute significantly to the County's capacity to meet its urgent greenhouse gas reduction and climate change mitigation goals.

Sincerely,



Jeffrey A. Creque, Ph.D.

Director of Rangeland and Agroecosystem Management

245 Kentucky Street, Suite A Petaluma, CA 94952

Phone: (707)338-4466

Email: jcreque@carboncycle.org

www.carboncycle.org

Environmental Services Department

Waste Reduction Division

December 29, 2017

Patrick Carter, Executive Director
Sonoma County Waste Management Agency

Re: Letter of Support for Renewable Sonoma

To Whom It May Concern:

The City of San Diego's Environmental Services Department (ESD) supports Renewable Sonoma's proposal for a composting facility for the City of Santa Rosa. Sonoma Compost, now part of Renewable Sonoma, has provided ESD with valuable technical assistance for its composting facility, the Miramar Greenery.

Sonoma Compost is well known for its professional work, and the top quality compost and mulches it produces. Their knowledge on particular product variations allows them to provide the best product for each specific use. They have generously shared expertise and provided technical assistance to other composting facilities. The Miramar Greenery has counted on their expertise on numerous occasions to solve processing issues, improve quality, and diversify types of products. Sonoma compost is regarded nationwide as a trusted source of technical expertise in the field, and has always been dedicated to the development of enhanced recycled products designed to build healthy and sustainable soil.

Sonoma Compost is well known for their education and outreach efforts, especially for providing free products to local residents as a means of highlighting the importance of organics diversion to build healthy soils. The Miramar Greenery has replicated many of the successful efforts developed by Sonoma Compost

In light of the longstanding collaborative relationship between the Miramar greenery and Sonoma Compost the City of San Diego's ESD is proud to offer this letter of support for Renewable Sonoma.

Sincerely,



Angela Colton
Deputy Environmental Services Director
AC/rr



Clean River

ALLIANCE
Russian River

Where talking trash is OK
cleanriveralliance.org

Founder:
Chris Brokate

Volunteer Staff:
Carol Shumate
Robin Factor
Terry Gwiazdowski

Mission:
*To remove trash from the
Russian River Watershed
and to educate citizens
about the problem of river
trash in our waters by
creating more public river
clean-up events.*

Fiscal Sponsor:
Russian Riverkeeper

Executive Director
Don McEnhill



Patrick Carter, Executive Director
Sonoma County Waste Management Agency
2300 County Center Drive
Santa Rosa, CA 95403
Date

Dear Mr. Carter,

Please accept this letter of support for Will Bakx and Alan Siegle as you proceed in the process of establishing a new composting site in Sonoma County.

Will and I are currently serving together on the Sonoma County Board of Supervisors Local Task Force on Integrated Waste Management and I have come to respect the level of knowledge Will has in this area as well as many environmental issues pertinent to Sonoma County.

Will has also been extremely helpful with the work that Clean River Alliance has been doing as part of Sonoma County Recovers – specifically with the work of wattle placement to protect our local creeks from toxic runoff in the fire damaged areas of Santa Rosa and other affected Sonoma County areas.

Also – even though we do not currently have a composting site in Sonoma County, Will is still actively recycling organics in a Marin County location. Alan and Will's previous work with Sonoma Compost (for almost 25 years) and their relationships with local farmers, wineries, the poultry industry and others, should make him the best candidate as your agency moves forward with a new Sonoma County composting facility.

Thank you for considering Will Bakx and Alan Siegle's application to head up a new Sonoma County composting program.

Sincerely,

Chris Brokate
Clean River Alliance Director



CROPMOBSTER™
Community Exchange

To Whom It May Concern:

12/21/17

I strongly encourage The County of Sonoma and The Sonoma County Waste Management Agency to accept and thoughtfully consider Renewal Sonoma's proposal for organics material processing.

While I do not have knowledge of the specific details of Renewal Sonoma's plans or proposal I do know that members of The Renewal Sonoma team are deeply knowledgeable of organic material processing, composting, and other waste-to-value or waste-to-resource approaches. Just as importantly they bring deep knowledge and perspective with regards to Sonoma County stakeholders, resource flows, pressing challenges as well as opportunities.

Finally, they care deeply about Sonoma County and are involved in so many crucial areas of the community such as fire recovery, waste management, local and sustainable agriculture and climate change/adaptation.

Sonoma County needs to continue transitioning from an outdated waste management mindset and associated infrastructure to one of value creation when it comes to our resource streams including organic materials.

At CropMobster we are committed to delivering solutions along these lines and helping with this transition. And I see Renewal Sonoma as a major contributor as well.

Please let me know if you have any other questions or ways that CropMobster can help.

All my best,

Nick Papadopoulos
CEO, CropMobster
SFBay.CropMobster.com
707.332.9209

A handwritten signature in black ink, appearing to read "Nick".





because every choice matters

PO Box 293, Petaluma, CA 94953 • (707) 789-9664 • www.dailyacts.org • moreinfo@dailyacts.org

January 2nd, 2018

Attention: Sonoma County Waste Management Agency

Dear Patrick Carter:

I'm writing on behalf of Daily Acts Organization in support of Sonoma Compost/Renewable Sonoma in their bid to re-establish local composting operations.

Sonoma Compost a nationally recognized and award-winning green business that is also an incredibly generous and critical community member. They have provided vital support to many schools, churches and non-profit organizations, helping safeguard the health and sustainability of our communities. As a business, they go above and beyond in supporting a wide range of community efforts and initiatives. This has shown to be true over many years and especially so in their fire response efforts working to protect our watersheds.

Through Daily Acts Community Resilience Challenge alone Sonoma Compost has delivered over 1,000 yards of free organic compost and materials to families, churches and community gardens in need. This has benefited our citizens and communities and moved forward the goals of Sonoma County, our cities and Water Agency.

As another example, the relationship between the City of Petaluma, Sonoma Compost and Daily Acts has resulted in a widely recognized and highly successful water conservation program, which has saved tens of millions of gallons of water by mulching lawns.

There is an array of important community and environmental benefits that come with re-localizing our compost and having such a valued green business as Sonoma Compost/Renewable Sonoma operate their business for the benefit of our communities. I truly can't recommend them enough!

Thank you for your consideration.

Trathen Heckman Executive Director, Daily Acts Organization



**FARM SUPPLY
& NURSERY**

3244 Gavenstein Hwy N
Sebastopol CA 95472



AG SUPPLY

1175 Fulton Rd
Fulton, CA 95439

January 3, 2018

Patrick Carter, Executive Director
Sonoma County Waste Management Agency

RE: Letter of Support for Renewable Sonoma

Dear Mr. Carter:

I am writing to you to express my fullest support of a decision to provide a facility to Renewable Sonoma for the resumption of production of its premium compost, "Sonoma Compost".

The agriculture community in Sonoma County has experienced significant difficulty with regard to the acquisition of the same quality compost that Sonoma Compost had produced. I am energized at the prospect that Sonoma Compost (now Renewable Sonoma) could resume production of its premier compost. I have known Will Bakx and Alan Siegle for many years, and hold them both in high regard for their honesty, integrity, business acumen, commitment to community, and leadership in organic agriculture. The resumption of Sonoma Compost production will provide a desperately needed supply of premium compost to the local agriculture community. It will also provide an opportunity for both of my companies, Harmony Farm Supply & Nursery and Harmony Ag Supply, to become a reseller of Renewable Sonoma's compost. This will create a significant potential for its distribution, and enhance my companies' ability to provide an additional healthy soil amendment to the public. Additionally, North County residents would welcome a premium compost outlet at our Fulton facility which would remove 40 pickup trucks from the Santa Rosa Hwy 101 corridor for each 40 cubic yard truckload of compost delivered to our site.

Harmony Farm Supply & Nursery and Harmony Ag Supply strongly support the award of a facility to Renewable Sonoma.

Thank you for your time.

Sincerely,

Rick Williams
Proprietor and General Manager
Harmony Farm Supply & Nursery
Harmony Ag Supply
707/823-9125

John Wick
Nicasio Native Grass Ranch
Nicasio, CA
January 1st 2018

Sonoma County Waste Management Agency:

The need for **Sonoma Compost/ Renewable Sonoma** has never been greater. As we witnessed the recent catastrophic fires in Sonoma, Napa, and across California, the awareness that global warming is our new normal is terrifying.

We now have an exciting alternative future.

Management of organic materials and the creation of quality compost are essential for the establishment of healthy soils that can stabilize the climate chaos from which we are suffering.

After 10 years of research, demonstration, and the creation of the California Healthy Soils Initiative, the Marin Carbon Project has inspired the adoption of Carbon Farming across California.

The concept is simple:

The creation of carbohydrates by plants is the basis of agriculture. Plants combine sunshine, soil moisture, minerals, and atmospheric carbon dioxide to create carbohydrates that become food, fuel, fiber, and flora. All of the carbon in carbohydrates comes from the sky, and nowhere else. By producing products that remove more carbon from the atmosphere than is re-released through the enjoyment of the products, agriculture can contribute significantly to cooling the planet. Increases in durable soil carbon increase the water-holding capacity of the soil, which then increases the production of plants, which remove more carbon from the air. If taken to scale, this self-feeding, virtuous cycle has the potential to help solve the climate crisis.

Research shows that compost is key to this strategy because even a one-time application of a half-inch of compost increases the rate of carbon sequestration in grazed rangeland soils (www.marincarbonproject.org).

Sonoma County has the opportunity to take a leadership role in adopting a form of agriculture that can provide abundant healthy foods, safe fibers, renewable fuels, and important flora. By producing solutions for human material cultural needs from agricultural systems that close the loops of energy, nutrients, water, and carbon, Sonoma County can become a Net-Climate-Beneficial County and help to create a healthy world for all of our citizens.

And it begins with how we manage organic waste streams. By creating beautiful, high quality compost, as Will Bakx and Alan Siegle have perfected, Sonoma will step into the bright future that we can see clearly.

Sincerely,



John Wick
Co-Founder Marin Carbon project



January 12, 2018

To whom it may concern;

LandPaths, established in 1996, is a community nonprofit dedicated to fostering a love of the land in Sonoma County.

We provide exceptional learning experiences and inspire lifelong environmental and community stewardship. Our goals include enabling residents to experience the beauty of Sonoma County, understand the value of regional ecosystems and local open spaces, and assist in stewarding the land. Through these experiences residents enhance their connections with nature, community, family and self.

LandPaths fully supports managing our community resources locally. This includes assuring that yard debris and food scraps generated in Sonoma County are processed locally into quality composts and mulches suitable for regenerating local soils. Building soil organic matter minimizes the need for chemical fertilizers, pesticides, and herbicides, and helps reduce erosion.

Sonoma Compost has been an important partner in the community for over 25 years, with a reputation for producing the highest quality soil amendments. Since the closure of the compost site at the County landfill, there has been a dearth of locally available quality compost and mulches suitable for organic farming.

Sonoma Compost is uniquely qualified to provide this important resource management service to the County; they are recognized nationally as an important model for resource management, processing organic discards into the high quality end products that the community needs and wants.

Sonoma County holds important "local" principals dearly, and this extends in no small way to our local natural resources. There is a need for Sonoma Compost in the new waste management structure in the County; please assure they are able to once again provide the high -end materials needed by local farmers, gardeners and landscapers.

Sincerely,

Development Manager
LandPaths

www.LandPaths.org

info@LandPaths.org

Office: 707-544-7284

P.O. Box 4648 Santa Rosa, CA 95402-4648

Outings: 707-524-9318

Douglas S. Lipton, PhD
4250 West Dry Creek Road
Healdsburg, CA 95448

January 3, 2018

Dear Sonoma County Waste Management Board & Board of Supervisors:

As a long-time Farmer, Soil Scientist, and business owner (Healdsburg SHED), I write to you to offer my unequivocal and strong support for **Sonoma Renewal** to bring back critically needed composting to our County.

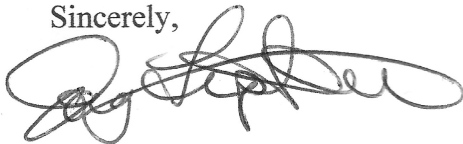
The reasons are numerous to support Sonoma Renewal (SR); here are my top two.

1. **They offer unmatched experience, commitment & professionalism.** I used their products from Sonoma Compost for decades on my own 16-acre farm, and consistently found their products and services of the highest quality.
2. **They are local and understand the needs of our community.** Because both principals in SR, Mr. Baxk and Mr. Siegel, have lived and worked in our County for decades they have incomparable understandings of the real needs of our farming community.

I would also add, as the "Composter-in-Chief" at SHED, that I envision 2018 as the year that we (as a County) can really begin to make composting in every neighborhood and city an essential ingredient to moving our County towards more sustainable and resilient practices; in farming, in restaurants, you name it. And Sonoma Renewal is clearly the group to help inspire us all to do that!

Thank you for considering my comments. And please feel free to contact me directly for any further information I could provide on this matter.

Sincerely,



Douglas S. Lipton, PhD
doug@healdsburgshed.com
707-799-4827 cell



January 2, 2018

Sonoma County Solid Waste Management Agency
2300 County Center Drive, Suite B-100
Santa Rosa, CA 95403

Re: SCWMA Request for Organic Materials Processing Services

To whom it may concern,

It is with great pleasure that I write this letter of support for the newly formed partnership, Renewable Sonoma. I have worked closely with Will Bakx for the past five years on the board of the California Organics Recycling Council and most recently on the Marin County Local Task Force Organics Sub-Committee. His knowledge, guidance and thoughtful discussions have influenced and shaped our understanding of current legislation, the importance of healthy soil, and the need for renewable energy from organics. I am confident that the combined experience from Will and Alan of Sonoma Compost, reBio, BioFerm, and SCS Engineers will set Sonoma County on the path to a truly sustainable organics management plan for all organic waste generated in the county.

Sincerely,

Kimberly Scheibly
Director of Compliance & Customer Relations
Marin Sanitary Service
Marin Recycling & Resource Recovery Association

1050 Andersen Drive, San Rafael, CA 94901
San Rafael, CA 94912 ■ (415) 456-2601 ■ Fax (415) 456-7595
www.marinsanitaryservice.com

100% Post-Consumer Waste Recycled Paper

Calla Rose Ostrander
21513 Highvale Trail
Topanga CA, 90290

Sonoma County Waste Management Agency
January 3rd, 2018

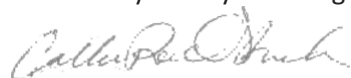
Dear SCWMA Representative,

Thank you for your agency's service to the residents of Sonoma County regarding waste diversion and for your consideration of Renewable Sonoma to operate a compost and green energy production operation adjacent to the Laguna Treatment Plant.

Building on AB939, which assisted in the formation of SCWMA, state legislation continues to drive the diversion of organics from landfills. Recently AB 876 (McCarty) directed counties to document the organic waste produced in jurisdiction and create plans for its diversion. The first law of its kind in the world to address short lived climate pollutants, SB 1383 (Lara) targets methane emissions from agriculture and landfills and will set new caps on emissions from these sources in the coming years. Simultaneously, the state and many regions in California are recognizing the role that agriculture and healthy soil can play in mitigating the effects of climate change. Carbon farming can be practiced by almost all forms of agriculture, offers economic benefits to producers, and enhances critical ecosystem services throughout the entire community. The creation of a local compost facility Sonoma County is a significant opportunity for Sonoma County to advance State Organics Diversion and Healthy Soils goals and support local carbon farming.

I have never met a farmer or rancher that doesn't want more compost. However, there are three major issues that often impede greater compost use: supply, price and quality. There is high demand in the market place for geographically proximal product, concurrently, the current cost of producing compost at state certified facilities has arguably limited the range and prices of product type available. In addition to the price of compost, the cost of trucking can double overall costs to producers if the source is located far away. Most compost that is produced is already going to high value crops like grapes or into urban landscaping. Limitations on geographically appropriate supply and lack of variety in product type are major issues for lower value commodity producers like animal agriculture. Finally, quality is of utmost importance both for the end user and operation itself. Well managed compost piles produce significantly less emissions of concern, have significant reduction in odors, and offer an essential solution to water contamination from high nitrate feedstocks.

In my experience Sonoma Compost, the compost operator in the Renewable Sonoma partnership, is one of the top-quality operators nationally. Observing the operation at West Marin Compost improve under the management of Will Bakx over the past two years in all three of the above aspects has impressed on me what ideal compost production can look like. Sonoma County would be offering a great benefit to its community and by choosing Renewable Sonoma. Thank you for your continued leadership.



Sincerely,
Calla Rose Ostrander
Phoenix Rising Resources, LLC



PERMACULTURE ARTISANS

Ecological Landscapes & Farms
License No 909417

To: Patrick Carter, Executive Director
Sonoma County Waste Management Agency

January 1st 2018

To Whom It May Concern,

I'm writing this letter to strongly recommend Sonoma Compost via Renewable Sonoma to be selected to run a new waste management/compost facility.

I am the owner operator of a local landscape contracting firm in Sonoma County called Permaculture Artisans. We have been in business since 2006. We have bought hundreds of yards of materials from the original Sonoma Compost every year we have been in business (except the last two years). They have always been an asset to our community by not only producing the highest quality affordable compost in the region but also providing exemplary customer service and support to their clients.

I am also the director of The Permaculture Skills Center, a vocational training school and incubation farm in Sebastopol. We have three farmers operating out of our 5-acre demonstration site. At the Permaculture Skills Center we provide training in all aspects of ecological farming, sustainable landscaping, homesteading and more. Sonoma Compost has always been an incredible community partner with our workshops and community events. In addition, every one of our farmers depended on the exceptional compost and service Sonoma Compost provided them for developing and maintaining their farming operations.

When Sonoma Compost had to stop operating it left a void in the community within the landscape and farming industries that no other vender has been able to fill. In all my companies and affiliate partners we have done our best to work with other vendors to acquire our needed landscape materials. While we hold many of our local vendors in high regard, no other provider has even come close to providing the quality materials and community relationship which Sonoma Compost and now Renewable Sonoma provides.

Furthermore, Will Bakx and Sonoma Compost stepped up in a huge way in the wake of the firestorm which hit our region in October. I had the honor of working with Will to support the development of fire remediation wattles and techniques to help filter toxic fire runoff and protect our water ways. This exemplary commitment to our community is what sets Renewable Sonoma apart. They take action to care for our community and our ecology in meaningful ways. They are highly innovative and develop cutting edge systems to turn our communities' waste into high quality products and they are incredible community partners and organizers. I hope you will approve Renewable Sonoma's proposal and help our county become a beacon of sustainable waste management once again.

Sincerely,
Erik Ohlsen

Owner| [Permaculture Artisans](#)
Director| [Permaculture Skills Center](#)
Principal| [ForeSite Mapping](#)

| License #909417 | P.O. Box 116 | Sebastopol, CA 95473 | 707-824-0836 | Client Initials: _____

| www.permacultureartisans.com |



Department of Agriculture/
Natural Resources

January 2, 2018

Patrick Carter, Executive Director
Sonoma County Waste Management Agency
2300 County Center Drive, Suite B-100
Santa Rosa, CA 95403

Dear Director Carter,

I am writing to express my support for Renewable Sonoma's proposal to build and operate a state of the art composting facility in partnership with Sonoma County and the City of Santa Rosa. They have a strong commitment to producing high quality compost and soil amendment products and a strong dedication to public education on composting.

As an agriculture educator, I think that education about composting should be a key part of the mission for a county composting facility. The Renewable Sonoma team has a long track record of leadership in compost education in Sonoma County and around the region. They will bring the experience and commitment needed to provide outstanding public education and community outreach with the compost facility. At Santa Rosa Junior College, Will Bakx teaches an Introduction to Composting class every year and is working with our department to create an on-farm composting certificate program that will be the first program dedicated to training people about farm scale compost production in the California Community Colleges. Will is also the chair of our industry advisory committee for sustainable agriculture, which convenes local agriculture industry leaders to advise our education programs. Will is well known for hosting field trips and tours at his previous Sonoma Compost facility. These tours provided unique and invaluable education to participants about the composting process. California needs more compost and needs more individuals to receive training on producing compost to support sustainable agriculture efforts statewide. Renewable Sonoma has great potential to make Sonoma County a leader in public education and engagement around compost.

Sincerely,

A handwritten signature in black ink, appearing to read "Joshua Beniston", with a stylized flourish at the end.

Joshua Beniston, Ph.D.
Sustainable Agriculture program
Santa Rosa Junior College
1501 Mendocino Ave.
Santa Rosa, CA 95401
jbeniston@santarosa.edu

1501 Mendocino Avenue, Santa Rosa, CA 95401 • (707) 527-4408 • Fax (707) 527-4651

Sonoma County Junior College District • www.santarosa.edu/ag

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Kate Fraga

January 2nd, 2018

To: Patrick Carter, Executive Director, Sonoma County Waste Management Agency

RE: Application for Compost Operations- Sonoma Compost/Renewable Sonoma

Sonoma County Conservation Action recommends that Sonoma Compost/Renewable Sonoma should be considered in the City of Santa Rosa and Sonoma County Waste Management Agency RFP processes, because they are well-qualified and have a history of being a good community-minded business. Conservation Action is not at this time making a formal project endorsement; rather, we are weighing in to say that we have worked with Sonoma Compost in the past, and find them to be a highly competent and qualified operator.

The lack of a local solution to municipal organics collection is a major problem for the environment and greenhouse gas generation in Sonoma County. It is critical that we as a community find a new local answer for our organics processing for the creation of compost for agriculture and home gardeners alike. We commend the City of Santa Rosa and Sonoma County Waste Management Agency for taking positive and proactive steps towards accomplishing this goal.

Sonoma County Conservation Action has had a long-standing relationship with Sonoma Compost, and supports their efforts and project goals for creating a municipal compost and renewable energy generation system at the Laguna Treatment Plant. Sonoma Compost has always been a good community partner and generous supporter of local causes in our region. Sonoma Compost was a founder and active participant in the Compost Coalition of Sonoma County, and has worked hard to stay at the forefront of composting and organics recovery issues in Sonoma County in a variety of formats.

We are confident that Sonoma Compost will be available to the public, and will do the hard work necessary to deliver an environmentally friendly system that will produce high quality compost at a rate that is accessible to the public, businesses and municipalities of Sonoma County.

We are also confident that they will work to manage the issue of the California Tiger Salamander and any other endangered species at the Laguna Treatment Plant area with care and attention to species recovery. We look forward to working collaboratively with the Renewable Sonoma team on these critical issues.

Thank you for your consideration of Renewable Sonoma/Sonoma Compost in the RFP process.

Sincerely,

A handwritten signature in black ink, appearing to read "Kerry Fugett". The signature is fluid and cursive, with the first name "Kerry" and last name "Fugett" clearly distinguishable.

Kerry Fugett
Executive Director,
Sonoma County Conservation Action

CC: Sonoma County Waste Management Agency



SONOMA ECOLOGY CENTER

Protecting the beauty and biodiversity of Sonoma Valley

Letter of Support for Renewable Sonoma and the Proposed Sonoma County Compost Facility at the Laguna Water Treatment Plant

Patrick Carter, Executive Director
Sonoma County Waste Management Agency

Sonoma Ecology Center strongly supports creation of a new composting facility at the Laguna Water Treatment facility on Llano Road. to process organic waste material sourced from throughout the county. While a necessary response to issues at the prior facility, the county's current practice of trucking this material out of the county is not a sustainable solution. It negatively impacts county efforts to reduce greenhouse gas emissions and also exports a material resource that could be better utilized locally.

As local farmers and gardeners adopt more sustainable practices that include improving soil and plant production with compost, having a local source large enough to meet this growing demand will become increasingly important.

While we have not seen the four proposals under consideration in response to the county's RFP, we believe that Renewable Sonoma's team offers the kind of local knowledge of our agricultural community and extensive local experience in the composting field that may exceed that of companies from outside the area vying for the contract.

We also feel that the involvement of Sonoma Compost's management team with the Renewable Sonoma proposal, and their longtime presence in and contributions to the local community, should be given appropriate weight when considering their bid.

A strong and vibrant "Go-Local" movement is here in Sonoma County for good reason, and the Renewable Sonoma proposal builds on this, retaining dollars generated from the proposed composting facility within our community.

For these reasons, we encourage that a new composting facility be constructed in Sonoma County and that the local contractor, Renewable Sonoma, be carefully considered for its operator.

Richard Dale,
Executive Director



Sustainable North Bay
PO Box 522, Graton CA, 95444
(707) 636-4732
info@sustainablenorthbay.org

January 2, 2017

Sonoma County Waste Management Agency
Sonoma County, CA

To the Sonoma County Waste Management Agency ,

I am pleased to send this letter in support of Renewable Sonoma and their effort to implement a state-of-the-art, high-quality compost and energy recovery system that will help close the sustainability loop on organics processing in Sonoma County.

At Sustainable North Bay our work is to help build resilient, just, and environmentally responsible communities. As sustainability pollinators, we connect business, policy, education, and community efforts and identify opportunities in climate justice.

Supporting a local organization to stop the out-hauling of green waste from Sonoma County is important to our economic and environmental goals. Specifically, the Renewable Sonoma projects supports these Sustainable North Bay priorities:

- Reducing the regional transportation footprint with a composting facility in Sonoma County.
- Locally produced compost and mulches available to the public.
- Locally produced renewable energy created from organic matter.

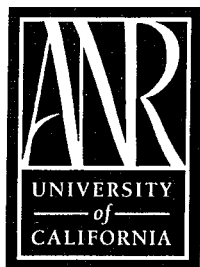
Our experience with the Renewable Sonoma team has been educational and rewarding. We recognize their environmental focus and history of supporting sustainability in the North Bay.

I support the Renewable Sonoma effort for a Sonoma County facility for organics processing.

Sincerely,

A handwritten signature in blue ink, appearing to read "Oren Wool", is written over the word "Sincerely,".

Oren Wool
Executive Director
Sustainable North Bay
oren@sustainablenorthbay.org



UNIVERSITY of CALIFORNIA
Agriculture & Natural Resources

COOPERATIVE EXTENSION • SONOMA COUNTY

133 Aviation Blvd., Suite 109 • Santa Rosa, CA 95403
Tel. (707) 565-2621 Fax (707) 565-2623 4-H (707) 565-2681
Master Gardeners (707) 565-2608 <http://cesonoma.ucdavis.edu>



January 2, 2018

Re: Letter of Support for Renewable Sonoma

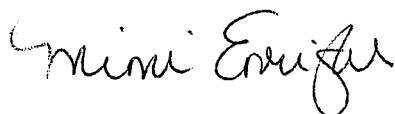
University of California Cooperative Extension (UCCE) Sonoma works to sustain a vital agriculture, environment, and community in Sonoma County by providing University of California research-based information in agriculture, natural resource management and youth development. We are writing in support of Renewable Sonoma's creative proposal and partnership to bring compost processing back into Sonoma County coupled with an energy recovery system. There is particular value in providing support to our farmers and home gardeners with increased access to locally produced compost options as well as more renewable energy options generated from our waste stream.

Over the years we have partnered with Will Bakx and Sonoma Compost to educate farmers and home gardeners on the value of and methods for composting. In 2016, UCCE Sonoma and Will partnered to educate commercial farmers and landscapers on how to make their own compost from available organic materials. Since the closure of the regional composting facility in Sonoma County, there has been a shortage of locally available compost. One of the ways to meet the demand for commercial quantities of compost for farmers and landscapers was to teach them how to make it themselves. This seminar helped close the gap on the lack of information on how to make compost on a scale between a backyard and a large commercial facility.

Will has been a valued partner over the years in helping support and build our community with specific information on home, farm and landscape scale composting. He has contributed to our non-profit Master Gardener program as well as other local non-profits with generous donations as well as providing a critical resource for our local farmers and home gardeners. We are hopeful to see their progressive vision of Renewable Sonoma implemented in Sonoma County. We are pleased to have the opportunity to express our full support for the goals of this project.

Sincerely,


Stephanie Larson
County Director



Mimi Enright
Program Manager



Redwood Empire

Chair

Steve Sheldon

Vice-Chairs

Oren Wool

Board Members

Linda Delair

Claudia Cleaver

D"Lynda Fisher

John Lowry

Bridget Brewer

Lewis Buchner

January 4, 2018

To: Patrick Carter
Sonoma County Waste Management Agency

Subject: Support Renewable Sonoma as Organics Processor

Dear Mr. Carter,

The US Green Building Council (USGBC) Redwood Empire Chapter is a volunteer-based 501©(3) nonprofit organization. Our vision and mission is to improve the quality of life by transforming the design, composition, and operation of the places where we live, learn, work, and play within the short space of a generation. This mission means that our children and grandchildren will grow up in green and healthy homes. This mission extends to the outdoors that surrounds our living and work spaces. As a board member, Will Bakx worked effortlessly to make sure that healthy soils and carbon farming/gardening would be part of the mission.

Sonoma Compost has a proven track record of providing Sonoma County with organic landscape materials that were essential tools in creating healthy soils. They understood the quality product that was needed to get a positive plant response as well as building soils for the long-term. The closure of Sonoma Compost left a huge void in our County. Renewable Sonoma has a sustainable approach to continue organics recycling with an added vision of green energy through anaerobic digestion. We as an organization applaud this approach.

We look forward to having affordable compost and mulch once more available in Sonoma County at a scale we need. Particularly now, after the fire, rebuilding of our soils and plant communities is a high priority. Renewable Sonoma is rooted in our community and has the expertise and drive to participate in that effort. We hope that they will be selected as our future provider of locally produced, recycled soil amendments.

Sincerely,

Steve Sheldon,

USGBC Redwood Empire

C: City of Santa Rosa Letter of Intent



December 7, 2017

Roy Alper
Principal
Renewable Sonoma LLC
10 Fourth St.
Petaluma, CA 94952

Steve Hamilton,
Sr. Vice President
SCS Engineers/SCS Energy
3843 Brickway Blvd., Suite 208
Santa Rosa, CA 95403

Re: Letter of Intent to Negotiate

Dear Mr. Alper and Mr. Hamilton,

The City of Santa Rosa ("City") is pleased to issue this Letter of Intent to Negotiate (LOI) to Renewable Sonoma, LLC. This LOI is based on the City's Board of Public Utilities ("Board") selection of your proposal ("Proposal") which is hereby deemed to include your written proposal, submitted on August 18, 2017, all answers to follow-up questions via email correspondence, and the oral presentations made in response to the City's "Request for Proposals for Location of an Organics Processing Facility on City of Santa Rosa Property" dated July 18, 2017, and all addendum thereto.

The purpose of this LOI is to provide written documentation confirming that you may include the use of City property in your response to the Sonoma County Waste Management Agency's ("Agency") "Request for Proposals for Organic Materials Processing" dated May 31, 2017. If you are successful in the Agency's selection process, the City agrees to enter into an exclusive right of negotiation in an effort to reach an agreement for the use of City property for an organics processing facility in line with the parameters set forth in your Proposal.

Any agreement will require the review and approval of the Board as well as environmental review of the proposed project under the California Environmental Quality Act, and therefore this LOI is only an agreement to negotiate in good faith and not a guarantee of, or commitment to, a final agreement or project approval. This LOI is not a guarantee of selection by the Agency, which is a process separate and apart from the City's process.

Sincerely,

Daniel Galvin
Chair of the Board of Public Utilities

D: Renewable Sonoma Operating Agreement

**OPERATING AGREEMENT
FOR RENEWABLE SONOMA, LLC
A CALIFORNIA LIMITED LIABILITY COMPANY**

This Operating Agreement ("Agreement"), is made effective as of August 10, 2017 ("Effective Date"), by and among the parties listed on the signature pages hereof (collectively referred to as "Members"), with reference to the following facts:

A. The Members desire to adopt and approve an operating agreement for the Company under the California Revised Uniform Limited Liability Company Act ("Act").

NOW, THEREFORE, the Members by this Agreement set forth the operating agreement for the Company upon the terms and subject to the conditions of this Agreement.

**ARTICLE I
ORGANIZATIONAL MATTERS**

1.1 Name: The name of the company is "Renewable Sonoma, LLC" and is referred to herein as the Company. The Company may conduct business under that name or any other name approved by the Manager.

1.2 Term: The term of the Company commenced as of the date of the filing of its Articles on August 7, 2017 and shall terminate pursuant to the terms of section 9.1 of this Agreement.

1.3 Office and Agent: The Company shall continuously maintain an office and registered agent in the State of California as requested by the Act. The principal office of the Company shall be at 10 Fourth St., Petaluma, CA 94952, or such location as the Manager may determine. The registered agent shall be stated in the Articles or as otherwise determined by the Manager.

1.4 Business of the Company: The Company is organized for the purpose of developing, owning and operating an organics processing facility in Sonoma County, California (the "Project") including but not limited to the following major facilities: Receiving and Processing Facility, Anaerobic Digestion Facility, Compost Facility and Balance of Plant.

1.5 Associate Companies and Contractor: The Company is developing the Project in association with reBio, LLC, the lead developer, and BIOFerm Energy, LLC, the provider and operator of the Anaerobic Digestion scope of work, both of which are referred to herein as Associate Companies. The engineering, procurement and construction contractor ("EPC Contractor") for the Project is SCS Engineers.

**ARTICLE II
CAPITAL AND LOANS TO COMPANY**

2.1 Initial Capital: The Capital of the Company initially shall be as set forth in Exhibit A to this Agreement.

2.2 Member Percentage Interests: The Member Percentage Interests in the Company are set forth in Exhibit A to this Agreement.

2.3 Additional Capital Contributions. Additional Capital Contributions over and above those described in section 2.1 of this Agreement, above, shall be required only if approved by a Majority in Interest of the Members, as defined in section 4.3, below. The Manager shall give fifteen (15) days' notice of such required Additional Capital.

2.4 Failure to Make Required Capital Contributions: If a Member does not contribute by the time required all or any portion of a Capital Contribution such Member is required to make as provided in this Agreement, the Company may, on written notice to such Member ("Delinquent Member"), permit the other Members in proportion to their Membership Interests or in such other percentages as they may agree, to advance the portion of the Delinquent Member's Capital Contribution that is in default, with the sum advanced treated as a Capital Contribution and the Membership Interest for each Member will be automatically adjusted to equal the percentage obtained by dividing (A) the Capital Account of such Member (including any Capital Contribution made on behalf of another Member) by (B) the aggregate Capital Accounts of all Members (including all Capital Contributions made on behalf of other Members). Upon the adjustment of the Membership Interests in the manner set forth in the preceding sentence, Exhibit A will be deemed to be amended to reflect such adjusted Membership Interests. Further, any Member who fails to contribute some or all of the required additional Capital Contribution shall be in default under this Agreement and shall have no right to participate in the management of the business affairs of the Company, including, without limitation, the right to vote or consent, until such time as the Member makes such contribution, but such Member shall not forfeit his/her/its rights to distributions of Distributable Cash (as defined in section 5.1, below) and Profit and Loss allocations (as provided in section 5.2, below).

2.5 Debt in Lieu of Capital: In lieu of Capital Contributions that may be required by Section 2.3, above, the Majority in Interest of the Members may require that each Member advance to the Company his/her/its pro rata share of any required funds. Any such advances made by the Members to the Company pursuant to this section 2.5 shall not be considered a Capital Contribution but shall constitute a debt of the Company to the advancing Members, payable as to principal and interest from the first available net Distributable Cash of the Company and, to the extent still unpaid, upon the termination and liquidation of the Company. Each advance shall bear simple interest on the unpaid principal balance thereof until paid, beginning on the date of such advance, at a rate equal to the lesser of (i) ten percent (10%) per annum, or (ii) the highest rate permitted to be charged under applicable law. Payments made to the advancing Members shall be credited first to interest and then to principal. At the request of the Member making any such advance the Company will execute a promissory note evidencing such debt.

2.6 Capital Accounts: The Company shall establish an individual capital account ("Capital Account") for each Member. The Company shall determine and maintain each Capital Account in accordance with the Internal Revenue Code and applicable Treasury Regulations.

2.7 No Interest: Unless otherwise approved by vote or consent of a Majority of the Members, the Company shall not pay any interest on Capital Contributions.

2.8 Member Loans: Except as otherwise provided in this Agreement or as otherwise required by a Majority in Interest of the Members, the Members shall have neither the right nor the obligation to make loans to the Company.

ARTICLE III MEMBERS

3.1 One Class of Members: There shall be one class of Members.

3.2 Admission of Additional Members: Additional Members may be admitted with the written approval of the Majority in Interest of the Members; upon admission of additional member(s) Exhibit A shall be amended to reflect the change in Member Percentage Interests. The Associate Companies, which are not Members of the Company at the time of the Company's formation, will have the right to become Members of the Company, and to contribute Capital as if they were Members at the time of the Company's formation, if either or both so elect in writing within eighteen (18) months of the Company's formation.

3.3 Remuneration to Members: Except as specifically authorized in this Agreement, no Member is entitled to remuneration for acting in the Company business.

3.4 Meetings: Meetings of Members are not required by this Agreement but may be called by any Member who owns a ten percent (10%) or more Interest in the Company. All meetings of the Members shall be held telephonically or at the principal office of the Company or at such other place within or without the State of California as may be determined by the Members.

3.5 Voting: Each Member shall have a voting interest in the Company in accordance with each Member's Percentage Membership Interest; said voting interests and rights may be modified upon the admission of additional members to the Company.

3.6 No Member Fiduciary Duties: No Member shall, to the maximum extent permitted by the Act and other applicable law, owe any duties (including fiduciary duties) to the Company, the other Members, or other person that may have an interest in the Company (whether direct or indirect, contractual or otherwise) solely by reason of being a Member, notwithstanding anything to the contrary existing at law (other than the Act), in equity or otherwise.

3.7 Competing Activities: Except as otherwise expressly provided in this Agreement or any other contractual arrangements between the Company and one or more Members, any Member may engage in or possess any interest in another business or venture of any nature and description, independently or with others, provided the business or venture does not compete with the business of the Company or any of its subsidiaries, and neither the Company nor any other Member shall have any rights in or to any such independent business or venture or the income or profits derived therefrom, and the doctrine of corporate opportunity or any analogous doctrine shall not apply to the Members and the members, shareholders, partners and affiliates thereof. The pursuit of any such business or venture shall not be deemed wrongful, improper or a breach of any duty hereunder, at law, in equity or otherwise. Any Member and the members, shareholders, and partners thereof shall be able to transact business or enter into agreements with the Company to the fullest extent permissible under the Act, subject to the terms and conditions of this Agreement.

ARTICLE IV MANAGEMENT AND CONTROL OF THE COMPANY

4.1 Management of Company by Manager: The business and affairs of the Company initially shall be managed by Will Bakx and Alan Siegle. The provisions of this Article VI apply to the Managers and to any successor Manager.

4.2 Control in Manager: Except as expressly provided herein, the Manager shall have all of the rights and powers of Manager as provided by law, and shall have, subject to the approval rights of the Members set forth elsewhere in this Agreement, complete charge of the affairs and management of the Company. The Manager shall have the authority to act on behalf of the Company in all matters respecting the Company, its business, and its property. Without limiting the generality of the foregoing, such powers include the right to do the following:

4.2.1 Manage the business and affairs of the Company;

4.2.2 Cause the Company to acquire such equipment and personal property as the Manager may deem necessary for the proper operations of the Project and fulfillment of the Company's purpose;

4.2.3 Borrow money from any party, including the Members, issue evidences of indebtedness in connection therewith, refinance, increase the amount of, modify, amend, or change the terms of, or extend the time for the payment of any indebtedness or obligation of the Company, and secure such indebtedness by mortgage, deed of trust, pledge, security interest, or other lien on Company assets;

4.2.4 Prepay in whole or in part, refinance, increase, modify or extend any obligation of the Company;

4.2.5 Employ from time to time, at the expense of the Company, persons required for the operation of the Company business including financial, legal and accounting services and real estate brokers and salespersons;

4.2.6 Pay all organization expenses incurred in the creation of the Company and all expenses incurred in connection with its operation;

4.2.7 Obtain necessary insurance for the proper protection of the Company, the Project, the Manager and/or the Members, including without limitation all insurance coverage referenced in section 8.4, below, or required by any lender to the Company, all of which insurance shall be written by an insurance company or companies licensed to do business in the State of California and domiciled in the United States;

4.2.8 Amend this Agreement, with the written consent or vote of a majority of the Members: (i) to reflect the admission, substitution, termination or withdrawal of any New Member in accordance with this Agreement; (ii) to add to the representations, duties or obligations of the Manager or surrender any right or power granted to the Manager;

4.2.9 Cure any ambiguity, to correct or supplement any provision herein which may be inconsistent with any other provision herein, or to add any other provisions with respect to matters or questions arising under this Agreement which will not be inconsistent with the provisions of this Agreement, including, without limitation, tax matters affecting the Members (provided, however, that no amendment shall be adopted pursuant to this subsection unless the adoption thereof (1) is for the benefit of or not adverse to the interests of the Members; (2) is consistent with the provisions of section 4.2; (3) does not adversely affect Members with respect to the distribution of Distributable Cash or the allocation of Profits and Losses for tax purposes among the Members or between the Members and the Manager (except as may otherwise be necessary to admit new Members); and (4) does not adversely affect the limited liability of the Members or the status of the Company as a partnership for federal income tax purposes);

4.2.10 Preserve the status of the Company as a "partnership" for federal income tax purposes;

4.2.11 *[Intentionally left blank]*

4.2.12 Guarantee the payment of money or the performance of any contract or obligation of any person or entity;

4.2.13 Sue on, defend, or compromise any and all claims or liabilities in favor of or against of the Company; submit any or all such claims or liabilities to arbitration;

4.2.14 Withdraw and substitute as Manager one or more entities owned and controlled by any of the Manager;

4.2.15 Retain legal counsel, tax consultants, auditors, and other professionals in connection with the Company business and to pay therefore such remuneration as the Manager may determine;

4.2.16 Determine the accounting method or methods to be used by the Company, which methods may be changed at any time by written notice to all Members; provided, however, the Manager may not change the accounting method or methods to be used by the Company if such change or changes will, in effect, change the Federal and State income tax reporting method or methods of the Members;

4.2.17 Open accounts in the name of the Company in one or more banks, savings and loan associations or other financial institutions or money market funds, and to deposit Company funds therein, subject to withdrawal upon the signature of the Manager or any person authorized by the Manager. If there is more than one Manager of the Company, any one Manager shall be authorized to perform the account and banking tasks set forth in this section 4.2.17.

4.3 Limitations on Manager' Authority: In addition to any other matters requiring the consent of the Members, the following actions shall require the written consent or the vote of

Members whose Percentage Interests, in the aggregate, equal or exceed fifty-one percent (51%) of the Percentage Interests of all Members (a "Majority" or "Majority in Interest"):

4.3.1 The sale of the Company as a going concern, whether by a sale of all or substantially all of the Company's assets or the sale of a Majority of the Company's Membership Interests; provided, however, that no Member may unreasonably withhold his, her or its consent to any proposed sale of the Company pursuant to this section 4.3.1;

4.3.2 The merger of the Company with another limited liability company or limited partnership;

4.3.3 The merger of the Company with a corporation or a general partnership or other person or entity;

4.3.4 An alteration of the primary purpose of the Company as set forth in section 1.4, above;

4.3.5 The lending of money by the Company to any Member;

4.3.6 Any act that would make it impossible to carry on the ordinary business of the Company;

4.3.7 The confession of a judgment against the Company.

4.3.8 A decision to dissolve the Company;

4.3.9 A decision to compromise the obligation of a Member to make a Capital Contribution or return money or property paid or distributed in violation of the Act.

4.4. Manager's Liability: Notwithstanding anything to the contrary set forth in this Article IV or elsewhere in this Agreement, subject to the good faith performance of Manager's duties as set forth above, the Manager shall have no responsibility or liability to any Member for losses incurred by such Member, including without limitation the loss of such Member's entire investment in the Company, or loss of, reduction in or devaluation of the fair market value of such Member's interest in the Company, regardless of how caused. The Manager shall not be liable to the Company or the Members for any loss or damage incurred by reason of any act performed or omitted to be performed by the Manager in connection with the business of the Company, if such Manager acted in good faith and such act or omission does not constitute fraud or other intentional misconduct. The Company shall defend, indemnify and hold harmless the Manager, its principals, agents and employees from any loss, liability or damage incurred or suffered by any such persons by reason of any act performed or omitted to be performed by them in connection with the business of the Company, including payment of insurance deductibles or self-retention obligations and attorneys' fees incurred by any of them in connection with the defense of any claim or action based on any such act or omission, which attorneys' fees may be paid as incurred, except to the extent indemnification is prohibited by law. The Manager shall reimburse the Company for any defense costs in the event the Manager is found by a court of competent jurisdiction or an arbitrator to be liable for acts of fraud or intentional misconduct. With respect to the Company's obligation to

indemnify the Manager, any such indemnification shall only be funded from the assets of the Company and not from the Members, and shall be made promptly following the fixing of the loss, liability or damage incurred or suffered whether by a final award of an arbitrator, a final judgment of a court, settlement, contract, or otherwise.

The Company may pay for insurance covering liability of the Manager or his/her/its agents or employees for actions or omissions to the extent permitted by law and nothing contained herein shall preclude the Company from (1) purchasing and paying for such types of insurance, including extended coverage for liability and casualty, workmen's compensation, managers errors and omissions insurance, directors and officers insurance, all as would be customary for any Person engaged in a similar business, or (2) from naming the Manager and any of his/her/its principals, agents, employees, or affiliates as additional insured parties thereunder.

4.5 Limitation on Members' Activities: Except as expressly provided herein, the Members shall take no part in nor interfere in any manner with the control, conduct or operation of the Company, and shall have no right or authority to act for or bind the Company.

4.6 Devotion of Time: The Manager shall devote a commercially reasonable amount of their time, effort, and skill for the operation of the Company.

4.8 Transactions between the Company and the Manager: The Manager may not engage in any transaction (including, without limitation, the purchase, sale, lease, or exchange of any property or the rendering of any service, or the establishment of any salary, other compensation, or other terms of employment) with the Company without the prior express written consent of a Majority of the Members.

4.9 Payments to Manager: Except as specified in this Agreement or as agreed to by a Majority of Members, the Manager is not entitled to remuneration for services rendered or goods provided to the Company.

4.10 Expenses: The Company shall reimburse the Manager the actual cost of goods and services used for or by the Company. The Company shall also pay or reimburse the Members and the Manager for all organizational expenses (including, without limitation, legal and accounting fees and costs) incurred to form the Company including preparation of this Agreement.

4.11 Officers: The Manager may appoint officers and prescribe said officers powers and duties at any time.

4.12 Removal of Manager. The Manager may be removed as follows:

4.12.1 At any time upon the vote or consent of a Majority in Interest of the Members (other than the Manager who may also hold a Membership Interest).

4.12.2 In the event that the Manager shall be removed pursuant to this section 4.12, the Members, by a vote or consent of a Majority, shall select a replacement Manager.

ARTICLE V DISTRIBUTIONS AND ALLOCATIONS

5.1 Distributions: Distributable Cash, which means Company net operating revenue as determined by the Manager, shall be distributed to Members pro rata in accordance with the Members' respective Percentage Interests. The Manager may, in his/her/its sole discretion, withhold the distribution of Distributable Cash if the Manager determines said funds need to be held in reserve to fund Company operations or payables.

5.2 Allocation of Profits and Losses: Profit and Loss allocations shall be made as soon as practicable after the end of each Fiscal Year of the Company. In each Fiscal Year of the Company, Profits and Losses shall be allocated to the Members in accordance with their respective Membership Interests as set forth in Exhibit A to this Agreement.

ARTICLE VI TRANSFER OF MEMBERSHIP INTERESTS

6.1 Transfer of Membership Interests. No Member shall be entitled to transfer, assign, convey, sell, encumber or in any way alienate all or any part of his/her/its Membership Interest except with the prior written consent of a majority of the Members, or in accordance with sections 6.1.1 to 6.1.8, below.

6.1.1 If a Member ("Transferor") desires to Transfer all or any portion of, or any interest or rights in the Transferor's Membership Interest ("Transferor Interest"), the Transferor shall notify the non-transferring Member(s) of that desire (the "Transfer Notice"). The Transfer Notice shall describe the Transferor Interest, including the agreed upon price and terms of the transfer, and provide the name of the transferee ("Transferee"). The non-transferring Member(s) shall have the option ("Purchase Option") to purchase all of the Transferor Interest for a price and on the terms described in the Transfer Notice ("Purchase Price").

6.1.2 The Purchase Option shall be and remain irrevocable for a period ending at 11:59 P.M. Pacific Standard Time on the thirtieth (30th) day following the day that the Transfer Notice has been received by all non-transferring Members ("Transfer Period").

6.1.3 At any time during the Transfer Period, the non-transferring Member(s) may elect to exercise the Purchase Option by giving written notice ("Purchase Notice") of its/their election to the Transferor and other non-transferring Members. The Transferor shall not have voting rights on any matter requiring the vote or consent of Members with respect to the proposed transfer.

6.1.4 The non-transferring Members' Purchase Notice shall fix a closing date (the "Transfer Closing Date") for the purchase, which shall not be earlier than ten (10) business days after the date that the Purchase Notice has been received by all of the non-transferring Member(s) nor more than thirty (30) days after the expiration of the Transfer Period.

6.1.5 The Purchase Price shall be paid in cash on the Transfer Closing Date.

6.1.6 If the non-transferring Members desiring to acquire the Transferor Interest cannot agree among themselves on the allocation of the Transferor Interest among them, then the

allocation will be proportional to the Percentage Membership Interests of those Members desiring to acquire the Transferor Interest.

6.1.7 If the Purchase Option is not exercised for the entire interest described in the Transfer Notice, then the Transferor shall be permitted to sell the Transferor Interest to the Transferee identified, at the price, and on the terms set forth in the Transfer Notice for a period of thirty (30) days after the expiration of the Transfer Period. If the Transferor does not Transfer the Transferor Interest within this thirty (30) day period, Transferor's right to Transfer the Transferor Interest pursuant to this section shall cease and terminate.

6.1.8 Except as otherwise provided in Article VII, for a period of three (3) years commencing the date of formation of this LLC, no Member shall sell, transfer or in any way dispose of any of his, her or its Membership Interest or any right or interest therein without obtaining prior written consent of a majority of the Members.

6.1.9 No Member may encumber a part or all of his or her membership in the LLC by mortgage, pledge, granting of a security interest, lien or otherwise unless the encumbrance has first been approved in writing by all other Members of the LLC.

6.1.10 Any Transfer or encumbrance of a Transferor Interest made in violation of the provisions of this Article VI shall be null and void and of no force or effect.

6.1.11 Notwithstanding the foregoing, a Member (or a Member's owner), may transfer his/her/its Membership Interest to a trust created for the benefit of such Member (or such Member's owner), such Member's spouse, and/or such Member's lineal descendants. For so long as the transferring Member is a trustee of such trust, the interest transferred shall be a full voting interest and an interest entitled to receive Distributable Cash and allocations of Company Profits and Losses. At such time as the transferee Member shall cease to be a trustee of such trust, the interest automatically shall become a non-voting interest.

ARTICLE VII DISSOLUTION EVENTS AND DIVORCE

7.1 Dissolution Events:

7.1.1 Upon the occurrence of the death, withdrawal, resignation, retirement, incapacity, bankruptcy, or dissolution ("Triggering Event") of any Member, the remaining Members shall have the right to purchase such Member's interest as if such Member is a Transferor under the provisions of section 6.1 of this Agreement, and the non-transferring Member(s) shall have a Purchase Option to purchase said Transferor's entire Membership Interest in accordance with the provisions of and sections 6.1.1 through 6.1.7, inclusive.

7.1.2 If the Purchase Option is not exercised for the entire Transferor Interest, then the entire interest, regardless of who holds or owns it, shall be, and remain, a non-voting Membership Interest.

7.1.3 The remaining Member(s) and the Transferor or the Transferor's legal representative shall set the purchase price ("Purchase Price") for the Transferor Interest by mutual agreement. If the parties cannot agree within thirty (30) days after the Triggering Event, then the Purchase Price of Transferor Interest shall be determined by appraisal.

Within fifteen (15) days following expiration of the thirty (30) day period, the non-transferring Members and the Transferor or the Transferor's legal representative each shall appoint an independent appraiser to give an opinion as to the value of the Transferor's Membership Interest. If either party fails to so designate an appraiser, the appraisal of the one (1) appraiser appointed shall be conclusive. Each appraiser shall deliver such written opinion to the non-transferring Members and the Transferor or the Transferor's legal representative within thirty (30) days after his or her appointment. If the two opinions of value differ by not more than ten percent (10%) of the higher opinion of value, then the value of the Transferor's Membership Interest shall be deemed to be the average of the two opinions of value. If the two opinions of value differ by more than ten percent (10%) of the higher opinion of value, then the appraisers shall, within ten (10) days after delivery of their opinions of value, jointly select a third qualified appraiser who shall review the previous two appraisals, perform his or own independent appraisal, and then select a value for the Transferor's interest that is not higher than the higher nor lower than the lower of the first two opinion of value. The third appraiser shall deliver his or her written opinion of value to the non-transferring Members, and the Transferor or the Transferor's legal representative within thirty (30) days after appointment, and it shall be binding on the parties as the value of the Transferor's Membership Interest.

The decision of the appraisers as provided hereinabove shall be final, conclusive and binding on all parties. Each of the parties shall pay one-half of all reasonable and proper costs and expenses of the appraisals; provided however, that each party shall bear his, her or its respective attorneys' fees incurred in connection with the appraisal procedure. The Members intend and hereby agree that all of the appraisers acting hereunder, however appointed, shall be qualified by profession and/or experience to make the evaluation required hereunder.

7.2 Divorce. If, in connection with the divorce or dissolution of marriage of a Member, a Member's interest in the Company, or any portion thereof, is transferred or awarded to that Member's spouse who is not already a Member, the spouse shall hold any such Membership Interest or any interest in such Membership Interest subject to all provisions of this Agreement and shall make no further transfers except as provided in this Agreement. The Membership Interest of any Spouse Member shall be a non-voting Membership Interest.

ARTICLE VIII

ACCOUNTING, RECORDS, REPORTING BY MEMBERS

8.1 Books and Records: The books and records of the Company shall be kept in accordance with the accounting methods followed for federal income tax purposes. The Company shall maintain at its principal office in California all of the following:

- 8.1.1 A current list of the full name and last known business or residence address of each member set forth in alphabetical order, together with the capital contributions, capital account and Membership Interest of each Member.
- 8.1.2 A copy of the Articles and any and all amendments thereto together with executed of any powers of attorney pursuant to which Articles or any amendments thereto have been executed.
- 8.1.3 A copy of this Agreement and any and all amendments thereto.

8.1.4 Copies of the Company's federal, state and local income tax or information returns and reports, if any for three (3) most consecutive years.

8.2 Bank Accounts: The Manager shall maintain the funds of the Company in one or more separate bank accounts in the name of the Company, and shall not permit the funds of the Company to be commingled in any fashion with the funds of any other person. The Manager is authorized to endorse checks, drafts, and other evidences of indebtedness made payable to the order of the Company, but only for the purpose of deposit into the Company's accounts.

8.3 Tax Matters for the Company: The Manager is designated as "Tax Matters Partner" (as defined in Code Section 6231), to represent the Company (at the Company's expense) in connection with all examination of the Company's affairs by tax authorities and to expend Company funds for professional services and costs associated with therewith. Unless otherwise agreed by a Majority of the Managers, the Tax Matters Partner:

8.3.1 shall manage the bank account(s) of the Company, collect all monies and pay all bills of the Company;

8.3.2 shall cause to be prepared at least annually, at Company expense, information necessary for the preparation of the Members' federal and state income tax returns, and shall deliver or cause to be delivered to the Members by March 15 of each year

8.3.3 at Company expense, shall cause the income tax returns for the Company to be prepared and timely filed with the appropriate authorities, and shall deliver or cause to be delivered to the Members by March 1 copies of the Company's federal, state, and local income tax or information returns for the prior year; and

8.3.5 shall provide such financial and other information relating to the Company as a Member may reasonably request; and.

ARTICLE IX DISSOLUTION AND WINDING UP

9.1 Conditions of Dissolution: The Company shall dissolve upon the occurrence of any of the following events:

9.1.1 Upon the consent or vote of a Majority of the Members;

9.1.2 Upon the entry of a decree of judicial dissolution pursuant to the Act; or

9.1.3 The sale of all or substantially all of the assets of the Company.

9.2 Winding Up: Upon the dissolution of the Company, the Company's assets shall be disposed of and its affairs wound up.

9.3 Order of Payment of Liabilities Upon Dissolution: After determining that all the known debts and liabilities of the Company have been paid or adequately provided for, and all Distributable Cash have been distributed to Members, the remaining assets shall be distributed to

the Members in accordance with their positive capital account balances, after taking into account income and loss allocations for the Company's taxable year during which liquidation occurs.

9.4 Limitations on Payments Made in Dissolution: Except as otherwise specifically provided in this Agreement, each Member shall be entitled to look only to the assets of the Company for the return of his or her positive Capital Account balance and shall have no recourse for his or her Capital Contribution and/or share of Profits against any other Member or Manager except as provided in Article X.

ARTICLE X INDEMNIFICATION

10.1 Indemnification of Agents: The Company shall indemnify the Manager or any Member and may indemnify any person who was or is a party or is threatened to be made a party to any pending or completed action, suit, or proceeding by reason of the fact that he or she is or was a Member, Manager, officer, employee, or other agent of the Company or that being or having been such a Manager, director, officer, employee, or other agent in a limited liability company, corporation, partnership, joint venture, trust, or other enterprise ("all such persons being referred to hereinafter as an agent"), to the fullest extent permitted by applicable law may hereafter from time to time permit.

ARTICLE XI DISPUTE RESOLUTION

11.1 Meet and Confer: In the event of any dispute arising out of or relating to this Agreement, the parties to the dispute shall meet and confer in good faith within two (2) business days after the event or circumstance giving rise to the dispute.

11.2 Mediation: In the event meeting and conferring on a dispute fails to resolve the dispute, the parties shall immediately submit the dispute ("Dispute") to mediation before a neutral independent mediator, at a location in Sonoma County (unless otherwise agreed by the Members). In the event that the Members cannot agree upon a mediator within thirty (30) days of the Dispute being submitted to mediation ("Selection Period"), then each party to the dispute shall select a mediator no later than ten (10) days after the end of the Selection Period and the selected mediators shall select a mediator for the Dispute. The costs of mediation shall be shared equally by the Members. Unless another time period is agreed upon by the parties, mediation shall take place no more than forty five days (45) after the date of a demand for mediation.

11.3 Arbitration: In the event that mediation does not resolve the Dispute, the parties agree to submit any Dispute not resolved through mediation to binding arbitration before a single arbitrator under the American Arbitration Association's Commercial Rules. The parties shall cause the arbitration process to commence within ten (10) business days after completion of an unsuccessful mediation.

If the parties to the dispute cannot agree upon an arbitrator, then any party to the dispute may file a petition in Superior Court of Sonoma County to have an arbitrator appointed.

The parties agree that any Superior Court petition to dissolve the Company, or for accounting, shall be stayed pending arbitration of a Dispute between the Members.

The arbitrator shall have jurisdiction to grant all legal, equitable and injunctive relief. The Arbitrator shall provide a reasoned decision, and such decision shall be final and binding upon the parties. The arbitration hearing shall commence within 45 days after commencement of the arbitration process.

Costs of arbitration shall be allocated equally among the parties. The prevailing party shall be awarded reasonable attorney fees and costs. The prevailing party shall be awarded reasonable attorney fees and costs, except that a party that has failed in good faith to meet and confer with respect to a dispute and/or mediate a dispute, shall not be entitled to an award of attorney fees and costs even if that party is determined to be the prevailing party in the arbitration.

ARTICLE 12

INVESTMENT REPRESENTATIONS

Each Member hereby represents and warrants to, and agrees with, the Manager, the other Members, and the Company as follows:

12.1 No Registration of Membership Interests. Such Member acknowledges that the Membership Interests have not been registered under the Securities Act of 1933, as amended (the "Securities Act"), or qualified under the California Corporate Securities Law of 1968, as amended, in reliance, in part, on such Member's representations, warranties, and agreements herein.

12.2 Membership Interests are Restricted Securities. Such Member understands that Membership Interests are a "restricted security" under the Securities Act in that Membership Interests will be acquired from the Company in a transaction not involving a public offering, and that the Membership Interests may be resold without registration under the Securities Act only in certain limited circumstances and that otherwise Membership Interests must be held indefinitely. In this connection, such Member understands the resale limitations imposed by the Securities Act and is familiar with SEC Rule 144, as presently in effect, and the conditions which must be met in order for that Rule to be available for resale of "restricted securities," including the requirement that the securities must be held for at least one year after purchase thereof from the Company prior to resale and the condition that there be available to the public adequate current information about the Company. Such Member understands that the Company has not made such information available to the public and has no present plans to do so.

ARTICLE XIII

MISCELLANEOUS

13.1 Notices: Any notice to be given or to be served upon the Company, the Manager, the Members, or any party hereto in connection with this Agreement must be in writing (which may include by email or facsimile) and will be deemed to have been given and received when delivered to the address specified by the party to receive the notice. Such notices will be given to a Member at the address specified in Exhibit A hereto, and to the Manager at the address provided by the Manager to the Company, each other and the Members. Any party may, at any time by giving five (5) days prior written notice to the other parties, designate any other address in substitution of the foregoing address to which such notice will be given.

13.2 Complete Agreement: This Agreement constitutes the complete and exclusive statement of agreement among the Manager and the Members with respect to the subject matter herein and replaces and supersedes all prior written and oral agreements among the Manager and the Members. To the extent that any provision of the Articles conflict with any provision of this Agreement, the Articles shall control.

13.3 Binding Effect: Subject to the provisions of this Agreement relating to transferability, this Agreement will be binding upon and inure to the benefit of the Manager, the Members, and their respective successors and assigns.

13.4 Jurisdiction: The Manager and each Member hereby consents to the exclusive jurisdiction of the Superior Court of Sonoma County and United States District Court for Northern California in any action on a claim arising out of, under or in connection with this Agreement or in the transactions contemplated by this Agreement.

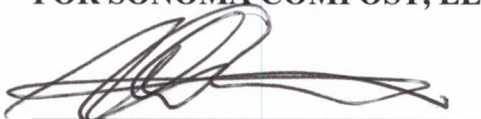
13.5 Severability: If any provisions of this Agreement or the application of such provision to any person or circumstances shall be held invalid, the remainder of this Agreement of the Application of such provision to persons or circumstances other than those to which it is held invalid shall not be affected thereby.

13.6 Amendments: All Amendments to this Agreement will be in writing and signed by all of the Members.

13.7 Multiple Counterparts: This Agreement may be executed in two or more counterparts, each of which shall be deemed an original, but all of which shall constitute one and the same instrument. Further, electronic signatures, including facsimile or emailed pdf. or equivalent signatures shall be deemed as valid as original signatures.


The undersigned Members hereby agree, acknowledge and certify to adopt this Operating Agreement:

FOR SONOMA COMPOST, LLC



Will Bakx, Member

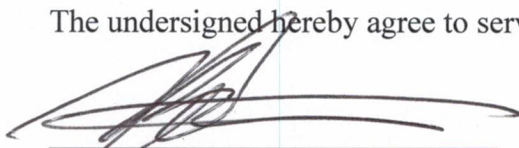
Date: 8-10-17



Alan Siegle, Member

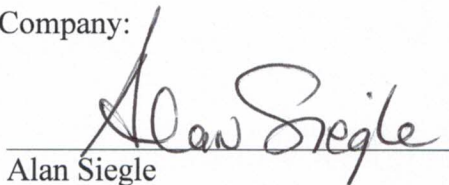
Date: 8/10/17

The undersigned hereby agree to serve as Manager for this Company:



Will Bakx

Date: 8-10-17



Alan Siegle

Date: 8/10/17

EXHIBIT A
Schedule of Members' Percentage Interests

MEMBER	PERCENTAGE INTEREST
Sonoma Compost Company, LLC	100%

E: Resumes

Resumes are provided in the following order:

- Renewable Sonoma:
- Sonoma Compost
- reBIO
- BIOFerm

Subcontractors:

- SCS Engineers, SCS Energy
- ECS
- Wiemeyer Ecological Sciences
- Craig Communications
- Matthew Cotton, Integrated Waste Management

Will Bakx
Sonoma Compost Company
6797 Giovanetti Rd, Forestville, CA 95436
willbakx@sonomacompost.com
707.479.8098

Summary

Respected soil scientist and successful business owner is a leader in the composting industry. Dedication to improving quality and standards of composting combines with in-depth knowledge of government regulation. Is a foundational industry spokesman who has affected policy throughout California and across the U.S. A practical environmentalist, sought-after speaker and educator, Will has devoted his life to improving the composting industry. He has lived, studied and worked in Sonoma County since 1979.

Professional Experience

Marin Carbon Project and Carbon Cycle Institute 2013—present
Carbon Sequestration Consultant

Provides advice and expertise for enhancing carbon sequestration in rangeland and agriculture through the application of compost. Works with project leaders to improve soil health and productivity through carbon farming that nurtures ecosystems and reverses global warming.

Compost Consultant 1998—present
Serves as consultant to existing and startup private and public composting operations. Establishes processes and protocols, provides resource information, streamlines function, improves product quality, supports adherence to regulations and environmental oversight.

Santa Rosa Junior College 2004—present
Adjunct Faculty
Developed syllabus and course materials and teaches the SRJC Agricultural Composting course, which covers all aspects of onsite composting such as materials management, monitoring, composting systems, vermicomposting, Biodynamic composting and more. Has helped SRJC's Sustainable Agriculture Program become one of the best in the state. Serves as chair of the SRJC Sustainable Agriculture Advisory Committee.

Sonoma Compost Company (SCC) 1993—2015
Co-owner, Director of Research and Product Development
Countywide yard debris composting program that diverted over 1,800,000 tons of organics from the landfill; created high quality mulches and composts. With products allowable for organic food production, SCC listed six products with OMRI, was CDFA registered since its inception and produced certified biodynamic compost.

Bennett Valley Farm Compost 1985—1993
Co-owner and Onsite Manager of Composting Operations, Product Development and Research
Processed agricultural and fish industry discards into high quality compost.

Professional Contribution

California Organic Recycling Council (CORC) 1993 —present
Founding member and current chair of this organization that represents the organic recycling industry in the development of regulations and legislation and provides community outreach and education.

California Compost Coalition (CCC) 2002—present

Will Bakx

Co-founded and served as executive board member of this group, which was established in response to a threat to the composting industry from a persistent pesticide. Currently, CCC serves as the lobbying voice for the organics industry.

California Compost Quality Council (CCQC)

—1990s

Founded this council to bring together key organizations to develop guidelines for the quality of compost in the state. The Council was comprised of California Landscape Contractors Association (CLCA), CCOF, CDFA, Association of Compost Producers (ACP), Caltrans, California Waste Management Agency (CWMA, now CalRecycle), UC Davis and various laboratories. While serving as its first chair, Will led the council in the creation of the first guidelines for compost quality in the U.S. and registered compost facilities that disclosed the parameters. CCQC was later rolled over to the Seal of testing Assurance (STA) program of the U.S. Compost Council.

California Certified Organic Farmers (CCOF)

1985—1989

Served as an inspector for this foundational organization of organic standards. Was an integral member of the Materials Review Committee, which was later turned over to OMRI.

Educational Outreach

Keynote speaker and presenter

1988—present

Will has given innumerable presentations on topics, including the composting process, on-farm composting, understanding and reaching compost markets, regulations, quality control, and water conservation. A partial list of his educational outreach includes the following:

- California Integrated Waste Management Board
- California Resource Recovery Association
- U.S. Compost Council
- Biocycle Conference
- Ecofarm Conference
- Heirloom Expo
- Pesticide Applicators Professional Association

Education

MS, Soil Science, University of California at Berkeley

BS, Environmental Studies, Sonoma State University

Expertise and Skills

Extensive knowledge of soil health, composting, sustainable agriculture, organic certifications and government regulations related to the compost industry. Excellent technical skills include a wide range of computer platforms and interfaces. Fully bilingual in Dutch and English; conversational in Spanish, German and French.

References Available Upon Request

Alan Siegle
Sonoma Compost Company
6797 Giovanetti Rd, Forestville, CA 95436
alansiegle@sonomacompost.com
707.664-9113

Summary

Environmentalist and entrepreneur. Started three successful businesses from the ground up. Expertise in business and finance, payroll, regulatory and safety requirements, marketing and customer relations, employee supervision and evaluations. Sonoma County resident since 1974, currently residing in Forestville.

Professional Experience

Double A Walnuts 2005-present

Managing Partner

Directs and oversees all aspects of 120 acre farm in the Sacramento Valley including integrated pest management, soil health, harvest, marketing and labor relations. Time commitment: typically one day a week.

Sonoma Compost Company (SCC) 1993-present

Co-founder/ Director of Operations and Finance

Responsible for management and oversight of receiving and processing operations, fiscal and business management, customer service, employee relations and agricultural marketing. Delivered composting services in Sonoma County in a highly successful public/private partnership from [year] to [year].

Bennett Valley Farm Compost 1985-1992

Co-Owner/Operator

Compost production and marketing.

Sonoma State University 1981-1985

Instructor—Ecological Food Production

Developed course of study and materials and taught all aspects of organic food production and oversaw the operation of the school farm.

Bennett Valley Farm 1978-2005

Founding Partner/Farmer

Produced organic vegetables and flowers and operated nationwide wholesale flower business.

Sonoma County Board of Supervisors 1977-1980

Administrative Assistant

Coordinated office of the District 1 Supervisor, including research and presentations on County policies and responding to constituent concerns.

Professional Associations and Affiliations

- Sonoma County CETA Advisory Council, Board Member
- Sonoma County Farmers Market-Board Member
- Sonoma County Tomorrow-Board Member, Board President
- Farmlands Group, Board Member

Alan Siegle

- Sonoma County General Plan Ag Element Committee, Appointed Member
- AB939 Local Task Force, Board Member
- Forestville Chamber of Commerce Board Member, Past President
- Ives Pool, Board Member, Treasurer and Past President
- Sonoma County Planning Commission, 5th District Representative
- West County Health Centers, Board Member/Finance Committee

Major Projects Administered

1991-2015

Bennett Valley Farm Compost and Empire Waste Management, Inc. entered into a joint partnership and conducted a pilot project in conjunction with the City of Santa Rosa to prove the feasibility of yard waste collection and composting. This successful pilot resulted in the Sonoma County Waste Management Agency awarding the partnership with the contract for countywide organics processing program, initiated in 1993. In 1998, the program transitioned to an entirely Sonoma Compost Company- run operation, which included wood waste recycling, biofuel, poultry waste, and a variety of products for soil enrichment and erosion control. During its tenure, SCC recycled over 1.8 million tons of organic matter.

2010-2015

In collaboration with the City of Petaluma and Daily Acts, SCC developed and promoted a water conservation and lawn conversion program.

2005

In collaboration with the City of Sebastopol, SCC piloted a residential food waste collection and composting program.

1998-2015

In collaboration with the City of Santa Rosa's sewage treatment plant, SCC designed and provided a bulking agent for the biosolids composting process.

Education

BA, Environmental Education, School of Environmental Studies and Planning, Sonoma State University

References Available Upon Request

Roy Alper (Lead Principal) will lead the development of the Renewable Sonoma Solution. Roy has 30 years of experience in the development, regulation and financing of alternative energy systems and multi-family residential development. Roy is an attorney with extensive experience in negotiating agreements for renewable and waste fueled projects, including feedstock supply and fuel amendment agreements, offtake agreements, obtaining environmental and land use approvals for projects, and in leading project development from conception to operation.

Power Project Development (1983-2001)

1991 – 2001 National Power Company Roy formed National Power Company with 4 other principals in 1991 to develop non-utility power plants internationally and to acquire and repower aging power plants in the U.S. that could no longer meet new regulations for acid rain emissions. By 1994 he became exclusively focused on development of a 120 MW, \$200,000,000 project in New South Wales, Australia. This project combusts waste coal fines from a large export coal mine with the lowest air emissions of any solid-fuel power plant in Australia, using pioneering Jamison floatation cells and a unique dewatering system to prepare the fuel for combustion in fluidized bed boilers.

The development of this project took 7 years through three changes of Australian regulatory regimes, four changes in management of the primary power customer and a change of ownership of the coal mine. The project became operational in 2001 after two major legal proceedings tried, but failed, to derail it. Roy led the development of all aspects of the project from the environmental review process (modeled on CEQA), through multiple contract negotiations and renegotiations, through the litigation, to meeting all conditions of approval and to the eventual financing by an international consortium of 14 banks. Upon project commissioning, the EPC contractor on the Project, ABB, won Australia's "Environmental Engineering Project of the Year" award.

As he retired from an active role in National Power Company, Roy laid the ground work for the company's wind power program that led to the subsequent development of three wind farms in Australia at a total investment of over \$700 million.

1983 – 1991 Independent Power Corporation (IPC) Roy formed IPC and was CEO of the Company until its sale to National Power Company in 1991. IPC was a pioneering consulting and development company in the then nascent non-utility power industry. Some highlights of his work at IPC include:

In 1983-85 he played a leading role in the development of the first non-utility electric generation plants to be developed in the United States. These 25 MW gas-fired combined cycle cogeneration projects were located at U.C. Berkeley, Agnews State Hospital, Camarillo State Hospital and Chino State Prison. He was responsible for negotiations with the State of California, negotiation of some of the first non-utility power purchase agreements in the country (with PG&E and Southern California Edison) and managing all project documentation for the financing of each project.

In 1983, he was elected to the Board of Directors of the newly formed Independent Energy Producers Association. In that capacity, played a leading role in developing the first standard offer power purchase contracts that utilities were required to offer to non-utility power plants.

He also played influential roles in the evolving legislation and regulation affecting non-utility power plants in the California Legislature, California Energy Commission and California Public Utilities Commission.

In 1987-1989 he played a leading role in the development of five 25 MW power plants in Contra Costa County that were the first in the country to combust waste fuel (petroleum coke) in compliance with California's strict air emissions regulations. These projects employed newly developed fluidized bed boiler technology that not only met air emissions standards, but produced gypsum as a reusable byproduct instead of solid wastes that required disposal.

In addition to the above projects, he worked on various aspects of development of multiple wind, geothermal, biomass and GTCC power projects. In 1988, he was retained to represent the Geothermal Resources Association to negotiate standard form power purchase agreements with the national utility of the Philippines. He was recognized as an expert witness on non-utility power plant regulation and utility resource planning in legal and regulatory proceedings in 10 states.

Real Estate Development (2002-2014)

On returning from Australia, he decided to stay closer to home and began to develop mid-rise residential, mixed use projects in Oakland. In 2002, Roy formed and managed a company that completed its first real estate development project in 2004. Temescal Place, a 6-story, 33,000 sf, \$8,000,000 condominium development at 48th St. and Telegraph Avenue was awarded the Gold Nugget at the 2005 Pacific Coast Builders Conference for Best Workforce Housing Project in the West and was a finalist in the San Francisco Business Times 2004 "Deals of the Year."

Temescal Place was the first private sector housing development in the neighborhood in 75 years. It jump-started the resurgence of the Temescal District, which has become one of the hottest neighborhoods in Oakland. The company completed its second project in 2006 - "Gate 48" at 574 48th St. in Oakland. This 12-unit, \$5,000,000 pilot project was the first mid-rise residential project in California to use modular construction technology and was featured in the S.F. Chronicle.

The partners went on to acquire 16 more parcels in the Temescal neighborhood and consolidated them into four more project sites that they entitled for over 300 residential units and 16,000 sf of retail space. The Great Recession prevented the company from completing development of these projects. In 2013, the company sold the entitled sites for nearly \$20 million and all the entitled projects are now either built or under construction by the companies that acquired them. Roy was the managing member of the LLCs that developed, entitled and sold these project sites.

Prior to starting his development career, Roy had key positions at the Oakland Redevelopment Agency, California Citizen Action Group, and California Public Utilities Commission.

EDUCATION

B.A. 1965 Purdue University, West Lafayette, Ind. Major: Political Science

J.D. 1968 University of California, Berkeley, CA Major: Urban Development

BRIAN EBERLY

Mobile: 707-330-5013

Email: brian@rebiofuels.com

Mechanical Engineer and Researcher with over 15 years of experience in alternative and low carbon energy. Proven track record researching, developing, improving, and operating renewable energy technology and projects in both industry and academia. Demonstrated competence in communication with both technical and non-technical audiences.

SELECTED ACCOMPLISHMENTS

- ** As Process Engineer and later Chief Operations Officer at **Yokayo Biofuels** successfully developed and implemented many plant improvements to increase quality and profitability as well as decrease consumption of resources. For example, decreased process water consumption by 50% while simultaneously decreasing fuel contaminants by 50%.
- ** As Research Assistant at **West Virginia University** successfully developed a novel chemical model to predict the yields of renewable biochar, oil and gas from wood waste pyrolysis given the constituents of various species of wood. Complete laboratory experiments to verify the accuracy of the model.
- ** As Research specialist at the **Connecticut Global Fuel Cell Center** executed a successful troubleshooting process for a novel methanol fuel cell system. Designed a series of experiments to eliminate many proposed causes for lack of system performance and suggest design improvements.
- ** As Process Engineer and later Chief Operations Officer at **Yokayo Biofuels** worked with colleagues to submit a successful CEC grant application for plant upgrade and expansion. Collaborated and communicated with engineering contractors, regulatory agencies, and stakeholders.
- ** As Technical Principal with **reBio, LLC** successfully developed and implemented a detailed analysis of organic waste products in Sonoma County. Surveyed local industries for feedstock volumes and seasonality. Performed basic characterizations for a wide variety of produces and coordinated with local University to establish biogas yields from each source.

PROFESSIONAL EXPERIENCE

reBio LLC, Petaluma CA

2014-Present

Technical Principal

Technical lead for low carbon energy project development company. Developed and implemented bench-scale testing and feedstock characterization study. Managed contractors for outsourced testing. Developed technical scheme for waste to energy plant, perform mass, energy, carbon balance calculations. Interacted with engineering contractors.

Yokayo Biofuels, Ukiah CA

2011-2014

Chief Operations Officers, Process Engineer

Managed daily operations of ~400,000 gallon per year waste to biodiesel plant with a staff of ~15. Oversee plant and vehicle fleet operations, maintenance, quality control, safety and regulatory compliance. Planned

plant renovation and upgrade and worked on grant application for project. Strategize feedstock acquisition and growth as well as expand relationships for product off-take. Designed and implemented reactors, piping, testing and protocols to improve safety, efficiency and quality. Develop new relationships with vendors for more sustainable solutions for production byproducts.

West Virginia University, Morgantown WV
Graduate Research Assistant

2009-2010

Performed computer modeling and experimental research on wood waste to energy project in the department of Mechanical Engineering as part of Master of Science degree program. Performed literature review, developed novel chemical model, wrote computer simulation program and verified model results of experiments. Experimental work was performed at the US Department of Energy's National Energy Research Laboratory.

Lawrence Livermore National Laboratory, Livermore CA
Research Intern

2007

Worked with project principal researcher to develop a computer program to analyze fusion energy experiment data. Program looked at photographs, identified particles and calculated distribution and speed.

Schlumberger-Doll Research, Ridgefield, CT
Engineering Intern

2004

Worked with lab technician and senior engineers to develop and test a novel fuel cell system. Interacted with manufacturing vendors to build system parts. Designed and constructed testing platform to evaluate design for eventual mass production.

West Virginia University, Morgantown, WV
Research Assistant

1999-2003

Worked with other students and professors on carbon-based products and energy research. Designed and build manufacturing systems and product characterizations protocols. Improved and tested novel turbine engine system. Designed improvement and modifications to pilot-scale coal purification plant.

EDUCATION

MS, Mechanical Engineering, **West Virginia University, Morgantown, WV**
CA Single Subject Teaching Credential, **Sonoma State University, Rohnert Park, CA**
BS, Mechanical Engineering, **West Virginia University, Morgantown, WV**

JAMES W. TSUI

Phone: 530-756-8429 Mobile: 530-204-8590

Email: jtsui@prodigy.net

Senior Project Finance Consultant with over 25 years of experience in energy finance and development. Proven track record in working with cutting-edge companies in engineering, finance, and renewable energy. Demonstrated competence in project management and financial analysis, with strong communication and negotiation skills and ability to build collaborative relationships with and between utilities, developers, engineers, lawyers, bankers, accountants, and other professionals.

SELECTED ACCOMPLISHMENTS

- ** Integral member of **Cleantech America**, a start-up team that successfully developed one of the first utility-scale solar PV projects in California. Led and participated in all aspects of project development and financing: initial power sales proposal preparation, power purchase contract negotiations, financial analysis (with particular emphasis on tax equity structures), permitting, interconnection studies, and construction monitoring. This 6.25 MW facility was the first solar PV plant to secure a utility power purchase contract under California's Renewable Portfolio Standard, and the first to be connected to the California ISO grid.
- ** As Development Manager at **National Power Company**, successfully negotiated with government-owned electricity distribution company for sale of electric power from a 120 MW power station in **Australia** costing A\$200 million. Performed all necessary financial modeling and analysis of project economics in support of negotiating process. Interfaced with lawyers, bankers, consultants, and host mine managers. Project successfully commissioned in 2001.
- ** As Project Development Manager at **Deutsche Babcock Energie**, successfully worked with local Indian company during the development of US\$200 million independent power project in **Tamil Nadu, India** for which DBE was the turn-key contractor. Analyzed myriad project risks and made recommendations for management and mitigation of same.
- ** Acting as Development Manager for **National Power Company**, negotiated with **Puerto Rico** Electric Power Authority for sale of output from 170 MW power plant. Structured partnership agreement with refinery host for integrated refinery upgrade/power plant project. Developed all analytical and financial models in preparation of this \$500 million project.
- ** Served as expert witness to plaintiff attorney in a lawsuit involving an electric utility and an independent power producer. Analyzed the financing structure of an energy limited partnership. Retraced historical cash flow for the partnership and documented anomalies in funds flows. Facilitated the settlement of years-old litigation.
- ** As senior development officer, traveled throughout **People's Republic of China** to research the market for independent power projects in that country. Conferred with officials from Central, Provincial, and Municipal governments for building of power plants. Concluded initial agreements for joint project development.
- ** As project finance banker at **Bank of America**, syndicated an off-balance-sheet \$146 million debt financing for **Boise Cascade's** Rumford Cogeneration Company. Structured complex and innovative interest rate swap, negotiated and documented complex deal structure with a syndicate of international banks. Completed transaction that solved many problems the client faced: technical and financial constraints, banking relationships, and profitability considerations.

PROFESSIONAL EXPERIENCE

reBio LLC, Petaluma CA
Principal, Development

2014 – Present

Manage the development process of finding a long-term solution to the agricultural waste challenges of Sonoma County. This includes canvassing the market for such a solution, soliciting input from the community, studying the technologies that could be utilized for a potential solution, and evaluating the economic viability and environmental sustainability of potential projects.

Zay Energy Consulting, Davis CA
Founder and Principal

2000 – Present

Played major roles in the development of solar energy and biomass-fueled power plants in the West Coast. Recognized expert in the finance of utility-scale solar projects. Conducted financial and feasibility due diligence of renewable energy projects across different market segments, and as potential acquisition targets. Served as expert witness in litigation involving the sale of integrated LNG and electricity-generating facility.

Cleantech America, Inc., San Francisco CA
Vice President, Senior Project Manager

2007 - 2010

Managed project development and project finance for start-up solar energy development company. Analyzed markets and led bid proposal preparations for various RFPs from leading investor-owned and publicly-owned utilities. Successfully managed interconnection process for several projects with the California Independent System Operator. Performed extensive financial analyses for all aspects of project development.

Deutsche Babcock Energie, Oberhausen, Germany
Project Manager, Business Development

1996 – 1999

Analyzed and developed private power and other infrastructure projects for potential equity investment by our company. Evaluated these projects for potential financial returns, and actively led the development and closing process. Worked independently from office in California.

National Power Company, Oakland CA
Development Manager

1992 - 1996

Evaluated power markets and initiated development efforts for domestic and international private power projects. Led and participated in structuring and negotiations of numerous commercial and financial contracts associated with independent power projects. Analyzed financial, taxation, technical, and broader economic factors and policy issues related to project development and operations.

State Street Bank & Trust Company, Boston MA
Vice President, Asset Securitization

1989 - 1991

EDUCATION

MBA, Finance and International Business, **Columbia University Graduate School of Business, New York City**
BSE, Industrial Engineering/Operations Research, **Princeton University, New Jersey**

CHRISTINE MCKIERNAN

Profession

VP of Technology & Development, BIOFerm™ Energy Systems

Years of experience

30 years

Memberships

Department of Energy, Bioenergy Technical Advisory

Contact

mcch@biofermenergy.com

608-287-4089

Education

M.S.En.E. New Jersey Institute of Technology

B.S.M.E. New Jersey Institute of Technology

Professional Experience

Ms. McKiernan is the Vice President of Technology and Development at BIOFerm™ Energy Systems. She has been actively designing, constructing, operating, and troubleshooting projects in anaerobic and aerobic treatment for over 30 years. Through her participation in various projects, she has overseen the process design and technology evaluation, process troubleshooting, and project engineering. She has reviewed and designed facilities for the capture of methane from biogenic materials such as food processing waste, agricultural crops, and animal slaughter.

She continues to contribute to the BIOFerm management team engaging in the areas of dry fermentation, wet fermentation, and small-scale anaerobic digestion, as well as gas processing.

Achievements at BIOFerm™ include: group leadership and responsibility for project development, design, scheduling, and budgeting total revenues over \$30 million; multi-national team building and development for implementation of; cost and progress tracking procedures, design review process, technology, and project management training; and management of existing operations support, cost reductions, and safety programs

Expertise & Technical Knowledge

- | | |
|--|--|
| <ul style="list-style-type: none"> • Group and international leadership • Project development, design, scheduling, budgeting • Cost and project tracking • Operations support, cost reduction • Waste to energy process development | <ul style="list-style-type: none"> • Strategy creation • New client development • Product and process evaluation • Ensymatic and bacteriological methods • Troubleshooting projects |
|--|--|

- Project engineering
- Capitol and operating estimates
- Technology evaluation
- Project development

Work History

BIOFerm™ Energy Systems - VP of Technology and Development _____ 2011-present
 Verliant Energy Partners- Vice President of Engineering _____ March 2011-December 2011
 Homeland Renewable Energy - Director of Engineering _____ 2010-2011
 Env. Management Corp/Microgy, Inc. - Director of Engineering, Lead Engineer __ 2003-2010
 CMB, LLC - Independent Business Consultant _____ 1997-2002
 BOC GASES - Manager, Senior Environmental Engineer _____ 1992-1997
 BUCK. SEIFERT and JOST, INC. – Project Engineer _____ 1992-1992
 JAROS BAUM & BOLLES, INC. - Mechanical Engineer _____ 1987-1989

Select Project Experience

Huckabay Ridge Renewable Energy Facility, Stephenville, TX: Director of Engineering

Renewable energy facility producing 650,000 MMBtu/year from over 450,000 ton/year of food wastes and manures. Responsible for design of facility upgrades to feedstock receiving and processing, gas upgrading compression and sulfur removal. Oversaw feedstock balancing, gas output quality control and operational reliability for pipeline injection.

Norswiss Renewable Energy Facility, Rice Lake, WI: Director of Engineering

Renewable energy facility producing 850 kW_e from dairy manure and food wastes. Oversight of facility upgrades to biogas sulfur removal, biogas quality controls, and operational controls related to CHP.

JBS Swift Renewable Energy Facility, Grand Isle, NE: Director of Engineering

Renewable energy facility planned for 200,000 MMBtu/year produced from beef processing and manures. Responsible for overall process design, detailed design, and critical integration with existing customer facility.

NADEEM AFGHAN

Profession

President and CEO, BIOFerm™ Energy Systems

Years of experience

24 years

Contact

nafghan@biofermenergy.com

608-229-6502

Education

M.S. Electrical Engineering, San Diego State University

B.S. Electrical Engineering, San Diego State University

Professional Experience

Mr. Afghan is the President and CEO of BIOFerm™ Energy Systems. Mr. Afghan has achieved great success working in corporate strategy and business-to-business sales management for multiple high-tech companies.

Under Mr. Afghan's leadership, BIOFerm quickly became a leading provider of turnkey biogas technologies in the North American market. During his tenure, BIOFerm has commissioned numerous biogas facilities including the first commercial-scale dry anaerobic digestion system in the United States.

BIOFerm continues to advance its technology offerings to provide turnkey gas upgrading and organic waste management solutions with his guidance.

Expertise & Technical Knowledge

- Renewable energy
- Sustainability
- Project management
- Product development
- Business development
- Project planning

Work History

BIOFerm™ Energy Systems – President and CEO _____ 2009-present
Pulse Engineering – National Sales Manager _____ 1997- 2008
Comair Rotron – Applications Engineer and Product Manager _____ 1993-1997

Select Project Experience

BIOFerm™ Dry Fermentation Anaerobic Digestion Plant with University of Wisconsin Oshkosh

President & CEO oversaw successful installation of North America's first industrial-scale dry fermentation biogas system. Negotiated contracts, aided in supplier selection, and undertook profit and loss responsibilities.

COCCUS® CSTR Anaerobic Digestion Plant at Rosendale Dairy in Rosendale, WI

Lead BIOFerm Team through installation of 2-tank biogas system to process manure for energy generation at the largest dairy in WI. Tasks included contract negotiation and profit and loss responsibility.

440 Million scf Gas Upgrading Project for High Plains Bioenergy/Seaboard Foods in Guymon, OK

President & CEO oversaw realization of Carbotech PSA gas upgrading project for grid injection. Negotiated contracts and undertook profit and loss responsibilities.



VIESSMANN Group



VIESSMANN Group



DINA BERTOLINI, WI P.E

Profession

Project Manager, BIOFerm™ Energy Systems

Years of experience

13 years

Memberships

Society of Women Engineers
American Herbalist Guild
Dodgeville Friends of the Library

Licenses

Civil Engineer Wisconsin Certified Professional Engineer
Certified Wetland Delineator

Contact

berd@biofermenergy.com
608-229-6509

Education

B.S., Civil Engineering, Transportation & Environmental Design, Iowa State University
B.S., Environmental Science, Iowa State University

Professional Experience

Ms. Bertolini is a Project Manager of project design services at BIOFerm™ Energy Systems. Throughout her career, Ms. Bertolini has gained expertise in many facets of project design, management, and construction procurement.

She has been a project manager for over 10 years and has been a practicing engineer for over 13 years.

Expertise & Technical Knowledge

- Project management
- Autodesk Civil 3D 2010-14
- MicroStation
- Milestone delivery
- Environmental permitting
- Civil engineering
- WinSLAMM
- Maintaining communication with client
- Training
- Managing budgets

Work History

BIOFerm™ Energy Systems – Manager Application Engineering	2016-present
DARR Engineering – Project Manager	2008-2016
Donohue & Associates – Design Engineer	2007-2008
Westbrook Associated Engineering, Inc. – Design Engineer	2002-2007

Select Project Experience

440 Million scf Gas Upgrading for High Plains Bioenergy/Seaboard Foods in Guymon, OK

Project Manager for \$4 million gas upgrading to RNG for grid injection project in Oklahoma. Project includes: biogas filtration, biogas compression, upgrading to natural gas pipeline quality requirements and treatment of off-gas, performance guarantee, and comprehensive control system for the whole package.

1.692 MW BIOFerm™ Dry Fermentation Anaerobic Digestion Plant in the City of Edmonton

Project Manager for a \$30+ million biomass utilization project in Edmonton with process engineer support and technology supplier for a multi-bay biogas facility with composting technologies, biogas production optimization and utilization, and project execution. The Project assists the City of Edmonton in its commitment to reducing greenhouse gas emissions by creating energy and quality compost input materials from municipal organic wastes.

Transportation Rehabilitation – Various Locations Around Dane County in Madison, WI

Project Manager for a deck overlay project on USH 14 with a design value of \$4 million and construction value of \$40 million. Completed all plans, and designed all aspects of the project except for the structure segments. Project was challenging as structure was in a super-elevated section on a vertical curve. Project Manager for the use of two new structure painting items for IH 90 Structures Maintenance Work with a design value of ~\$50,000 and construction value of ~\$650,000.

Carbotech
VIESSMANN Group

Schmack
VIESSMANN Group

BIOFERM™
ENERGY SYSTEMS

STEVEN SELL, P.E

Profession

Manager Application Engineering, BIOFerm™ Energy Systems

Years of experience

6 years

Licenses

Wisconsin Professional Engineer License

Contact

sels@biofermenergy.com

Education

M.S., Agricultural Engineering & Biorenewable Resources & Technology, Iowa State University

B.S., Biological Systems Engineering, University of Wisconsin Madison

Professional Experience

Mr. Sell holds a Bachelor of Science degree in Biological Systems Engineering from the University of Wisconsin Madison and a Master of Science degree in Agricultural Engineering & Biorenewable Resources and Technology from Iowa State University.

He has 5+ years of experience in the biogas industry and specializes in the areas of co-substrate anaerobic digestion and gas purification.

Mr. Sell has played a significant role in the design and commissioning of BIOFerm biogas technologies in the U.S. including BIOFerm™ Dry Fermentation, EUColino, and COCCUS.

Expertise & Technical Knowledge

- | | |
|------------------------|----------------------------|
| • Team management | • Performance optimization |
| • Biological startup | • Financial modeling |
| • Project snapshots | • Feasibility studies |
| • Laboratory analytics | • Post-Sales Support |

Work History

BIOFerm™ Energy Systems – Manager Application Engineering	_____	2011-present
Iowa State University – Graduate Research Assistant	_____	2009-2011
WI Department of Natural Resources – Air Management Specialist	_____	2007-2009

Select Project Experience

University of Wisconsin Oshkosh BIOFerm™ Dry Fermentation Plant

The first dry fermentation anaerobic digestion facility in North America which processes food waste, yard waste, and manure bedding material. Helped commissioning and start-up of biological activity. Assisted in post-sales support and optimization.

City of Edmonton 1.692 MW BIOFerm™ Dry Fermentation AD Plant

Assistant project manager for a \$30+ million biomass utilization project in Edmonton with process engineer support and technology supplier for a multi-bay biogas facility with composting technologies, biogas production optimization and utilization, and project execution. The Project assists the City of Edmonton in its commitment to reducing greenhouse gas emissions by creating energy and quality compost input materials from municipal organic wastes.

University of Wisconsin Oshkosh, Allen Farms EUColino

Small-scale, plug-flow, containerized anaerobic digester on 130-head dairy farm. Help organized and manage product delivery, installation, commissioning, start-up and post-sale support/optimization.

DREW WITTE

Profession

Electrical Engineer, BIOFerm™ Energy Systems

Years of experience

12 years

Licenses

Wisconsin Professional Engineering License

Contact

witd@biofermenergy.com

608229-6505

Education

M.S., Electrical Engineering, Purdue University Indianapolis

B.S., Mechanical Engineering, Northwestern University

Professional Experience

Mr. Witte is an Electrical Engineer for BIOFerm™ Energy Systems. While obtaining his Master's degree in Electrical Engineering at IUPUI, he worked at the Lugar Center for Renewable Energy under Dr. Peter J. Schubert. His work at the LCRE included re-commissioning the electrical control systems of two small renewable systems (MSW gasification system and biomass to syngas system).

Mr. Witte's previous industry experience includes designing and building electrical control systems for CNC milling machines, CNC welding machines, and vision inspection machines for aerospace, pharmaceutical, and consumer goods.

Expertise & Technical Knowledge

- Control Systems
- AutoCAD Electrical 2017 and SolidWorks
- Mechanical engineering
- P&IDs

Work History

BIOFerm™ Energy Systems – Electrical Engineer	2016-present
Acquire Automation - Electrical Engineer	2014-2014
Lugar Center for Renewable Energy – Research Assistant -	2012-2014
Green Sky Engineering, LLC -- Mechanical Design Engineer	2011-2013
Spider Company Inc. -- Manufacturing Engineer	2011-2012
Fluidic MicroControls -- Lead Engineer, Energy Systems	2008-2010
Alion Science and Technology – Associate Research Engineer	2004-2008

Select Project Experience

City of Edmonton BIOFerm™ Dry Fermentation AD Plant

Electrical Engineer for a \$30+ million biomass utilization project in Edmonton with process engineer support and technology supplier for a multi-bay biogas facility with composting technologies, biogas production optimization and utilization, and project execution. Led development of instrumentation selection, sizing, and controls package.

440 Million scf Gas Upgrading for High Plains Bioenergy/Seaboard Foods in Guymon, OK

Electrical systems and controls engineer for \$4 million gas upgrading to RNG for grid injection project in Oklahoma. Project includes: biogas filtration, biogas compression, upgrading to natural gas pipeline quality requirements and treatment of off-gas, performance guarantee, and comprehensive control system for the whole package.

Lugar Center for Renewable Energy; Research Assistant

Re-commissioned 250 kW trash gasification system and biomass pyrolysis system for on-campus research. Responsible for upgrading electrical control systems and repairing process valves, blowers, dampers, and VFD's.

Fluidic microControls, Inc.; Lead Engineer of Energy Systems

Designed and built prototype for using electricity to produce nitrogen fertilizer from air and water. Responsible for overall process design, detailed design, and integration of sub-systems.

STEVEN M. HAMILTON

Education

BS – University of Florida, Zoology/Environmental Studies

Professional Affiliations

Solid Waste Association of North America (SWANA)

Professional Experience

Mr. Hamilton has over 30 years of environmental project experience, with particular emphasis in solid waste management. Mr. Hamilton's project experience ranges from hands-on participation in field and design work to direction of solid waste management projects. This work has involved over 700 projects on more than 350 sites throughout the United States and abroad. His project responsibilities have included solid waste planning; solid waste privatization; landfill siting, design, and operations and closure permits and plans; landfill contamination assessments and remedial actions; landfill leachate monitoring and treatment system design; landfill groundwater and landfill gas (LFG) monitoring programs; landfill Clean Air Act permitting and compliance; biogas Clean Development Mechanism (CDM) projects, digester gas and landfill gas (LFG)-to-energy (LFGE) recovery feasibility due diligence, studies, and investigations; and the testing, design, installation, and operation of digester gas and LFGE facilities, and LFG migration and emission control systems.

Mr. Hamilton is the Director of SCS Energy, which is the SCS Engineers' profit center that designs, builds, and operates biogas; primarily LFG and digester gas to energy projects. SCS Energy has performed over 40 design or design/build biogas-to-energy projects and currently operates/maintains biogas-to-energy projects nationwide. The biogas end-uses include electric power generation (reciprocating internal combustion engines, turbines, microturbines, and fuel cells), direct-use of biogas in lieu of natural gas at industrial, utility, and institutional facilities, production of high-Btu biogas for injection into natural gas pipelines, and production of biogas-derived compressed natural gas (CNG) for use as vehicle fuel.

Mr. Hamilton has served as Director of SWANA's Landfill Gas/Biogas Technical Division. He also served as Chair of SWANA's Landfill Gas Training Program for over 10 years, and remains active in SWANA. He has extensive experience in providing solid waste training and education at numerous venues in the United States and abroad.

Some of the projects in which he has been involved include:

BioFuels Energy, LLC, Digester Gas to High-Btu Gas Facility Operation. Under Mr. Hamilton's direction, SCS Energy operates and maintains a 1,110-scfm inlet digester gas to high-Btu gas facility located at the Point Loma WWTP in San Diego, California. The facility was designed and constructed by SCS Energy. The facility converts digester gas to pipeline quality gas utilizing membrane separation technology. The product gas is injected into the local natural gas utility distribution network, where it is transported to the University of California, San Diego to fuel a fuel cell power generation facility. The digester gas facility also fuels an on-site fuel cell to provide power to run the facility.

City of Fresno, California, Digester Gas to High-Btu Gas Facility Maintenance. Under Mr. Hamilton's direction, SCS Energy maintains a 1,530-scfm inlet digester gas to high-Btu gas facility located at the City of Fresno's WWTP in Fresno, California. The facility was designed and constructed by SCS Energy. The facility converts digester gas to pipeline quality gas utilizing membrane separation technology. The product gas is used in the City's onsite turbine facility to generate power used in the WWTP.

Metrogas, S.A., Digester Gas to High-Btu Gas Design. Under Mr. Hamilton's direction, SCS Energy designed a 2,500 scfm inlet digester gas to high-Btu facility for Metrogas, S.A. in Santiago, Chile, which is the local natural gas utility. The facility converts digester gas from the La Farfana Wastewater Treatment Plant (WWTP) into pipeline quality gas for distribution to Metrogas' customers.

University of California Office of the President, LFGE High-Btu Pipeline Gas Design-Build. Under Mr. Hamilton's direction, SCS Energy is designing a 2,540 standard cubic feet per minute (scfm) inlet LFG to high-Btu pipeline gas facility for the University of California office of the President (UC) at the Woolworth Road Landfill in Keithville, LA. After completing the design, SCS Energy will construct the project. The product gas will be injected into a nearby natural gas transmission line as a renewable gas. The UC will use the renewable gas to replace natural gas in one or more of its on-campus power generation facilities.

University of New Hampshire, Landfill Gas to High-Btu Gas Facility Operation. Under Mr. Hamilton's direction, SCS Energy operates and maintains a 6,000-scfm inlet LFG to high-Btu gas facility at the Turnkey Landfill in Rochester, New Hampshire. The facility was designed and constructed by SCS Energy. The facility converts landfill gas to pipeline quality gas utilizing membrane separation technology. The product gas transmitted via a dedicated pipeline to the University's on-campus turbine power plant. The project also includes a 3.2-MW LFGE facility to power the high-Btu plant. The power generation facility uses two Caterpillar G3520C gensets.

Sonoma County, California, LFG Collection System and Blower/Flare Station Design. Design, permitting, and construction oversight of an LFG odor, migration, and emission control facility at the Sonoma Central Disposal Site, Petaluma, California. The facility included two separate wellfields from which LFG is extracted by a single blower station and destructed in an enclosed 1,700 cubic feet per minute (cfm) flare.

Confidential Client, Recycling Facility Siting, Santa Rosa, California. Ecological & geotechnical site studies for a proposed 2,000-ton-per-day waste transfer and recycling facility in Santa Rosa, California, for a confidential private client.

LESLIE C. LUKACS

Education

BA – Environmental Studies, University of California, Santa Barbara, 1997

Specialty Certifications

U.S. Composting Council Certified Organics Facility Manager

Affiliations

California Resource Recovery Association (CRRRA) – Board Advisor

Green Initiatives for Venues and Events – Founder, Executive Committee

Zero Waste International Alliance – Board of Directors since 2010, Chair of the Annual International Dialogue, and Chair of the Affiliation Committee

National Recycling Coalition

Northern California Recycling Association

Sonoma County AB 939 Task Force Member – Represent Town of Windsor and Chair of the Zero Waste Task Force

Compost Coalition of Sonoma County – Co-Founder and Executive Team Member

Professional Experience

Ms. Lukacs has over 20 years of experience providing sound environmental consulting services for both the private and public sectors. She specializes in the design and implementation of comprehensive sustainability and zero waste programs for large institutions, public agencies, venues, and events throughout the nation. Experience includes organics management plans, zero waste program development and coordination, stakeholder outreach management, waste audits and characterization studies, compliance, and grant writing and administration. She has been instrumental in pioneering the greening of venues and events throughout the nation and is a leading advocate for the industry. She has implemented zero waste programs at NFL stadiums, government facilities, universities, theme parks, convention centers, performing art centers, and numerous institutions.

Ms. Lukacs is founder and Chair of the Green Initiatives for Venues and Events (GIVE) Council, an organization dedicated to increasing the awareness of implementing green programs at venues and special events. She developed a 3-hour Zero Waste Venues and Events course as part of an industry professional certification program. The Solid Waste Authority of North America, U.S. Composting Council, and the California Resource Recovery Association recognize the course as part of their professional certification curriculum.

Ms. Lukacs is co-founder of the Compost Coalition of Sonoma County, a diverse coalition of citizens and organizations that champion efforts to keep and process organic materials in Sonoma County.

Her project experience includes:

Food Recycling Improvements for Contra Costa County Solid Waste Authority. Ms. Lukacs was hired by the Contra Costa County Solid Waste Authority (DBA RecycleSmart) as project manager to increase food waste diversion at 200 businesses currently participating in Republic Services' Food Recycling Project (FRP). Tasks included overseeing participating businesses' adherence to the prevention of contamination standards for food waste destined for digestion at the East Bay Municipal Utility District (EBMUD) anaerobic digestion facility in Oakland and providing support in other areas as needed. This included conducting assessments of participation-levels, equipment and signage needs, training requirements, and face-to-face interaction with each business's key influencers for high-participation in the FRP. SCS's approach to overcoming the obstacles and challenges impeding increased participation from businesses across the RecycleSmart area were driven by five key objectives:

- Prioritizing businesses with the greatest opportunity to divert food waste.
- Utilizing the visual characterization data captured in 2015 to provide a well-planned and efficient start to the project.
- Organizing the most efficient schedule for meeting with current participants.
- Developing a system to transfer documents and effectively communicate throughout the project.
- Providing field staff familiar with the FRP in the RecycleSmart service area.

Waste Characterization and Visual Study for Sonoma County Waste Management Agency. Ms. Lukacs conducted a waste characterization and visual characterization of 300 self-haul loads disposed at 3 Sonoma County transfer stations over 2 seasons. This included identifying materials that may be present in large quantities, characterizing loads that contain bulky items, and characterizing waste streams that tend to have substantial composition variation within individual loads (e.g., loads that are half dirt and half lumber, separated at opposite ends of a truck). The procedures included measuring the volume of the waste, recording the estimated percentage of the load corresponding to each material class, and recording the estimated percentage for specific material categories within the material classes.

Los Angeles County, Commercial and Institutional Recycling Program (CIRP). Ms. Lukacs serves as project manager to Los Angeles County's CIRP division to create a visible, easily accessible, and effective sustainable materials management and organics diversion programs for large generators in the County, including County facilities, to reduce waste and to increase diversion of municipal solid waste. The project team creates Resource Management Plans (RMPs) that are specific to individual business and institutions based on the results of the site visits. The RMPs incorporate proven and cost-effective best management practices for waste reduction and diversion.

BRUCE J. CLARK, PE

Education

Graduate Studies, Environmental (Sanitary) Engineering, University of Miami, 1981

BS – Civil Engineering, Florida International University, 1977

AA – Natural Sciences, Miami Dade Community College, 1974

Professional Licenses

Professional Engineer – Florida

Specialty Certifications

Board Certified Environmental Engineer (BCEE), American Academy of Environmental Engineers – Waste Engineering

Certified Safety Professional (CSP) Engineering, Board of Certified Safety Professionals

Certified Hazardous Materials Manager (CHMM), Institute of Hazardous Materials Managers

Adjunct Teaching Faculty, Solid Waste Association of North America (SWANA)

LEED® AP – U.S. Green Building Council

Professional Affiliations

Solid Waste Association of North America

American Society of Civil Engineers

American Academy of Environmental Engineers

Professional Experience

Mr. Clark has more than 29 years of environmental engineering consulting experience in the solid waste industry, including master planning, design, permitting and construction oversight, and has managed significant projects on practically every type of solid waste management facility. Some relevant projects completed include those following. Many of his projects in solid waste were “firsts” in the industry.

Material Recovery Facilities (MRFs)

Mixed MRF, Dane County, WI. Technical Advisor on the \$3 + million major retrofit of a C&D transfer station converting from compacting to a high-tech facility processing 400 tons per day (TPD) using

vibratory, optical and air blast systems for precision separation. Facility includes an A and B line and manual pickling platform for maximum extraction and separation of recyclable commodities, including; wood, metals, fibers, asphalt shingles, dry wall, glass, and plastics. Covered tipping floor was expanded to include inside electric grinder for vegetation. Total building footprint is 60,000 square feet (sf).

C&D and Trash MRF, Tampa, FL. Project Manager for the design, permitting and start-up of a \$7 million, 900-TPD MRF. The MRF was retrofitted into two 55-year-old buildings. The MRF featured vibratory, optical and air blast systems for precision separation. Facility utilizes 19 conveyors and two were reversing. Facility includes an A and B line and manual pickling platform for maximum extraction and separation of recyclable commodities, including; wood, fibers, metals, asphalt shingles, dry wall, glass, and plastics.

Mixed MRF, Northern U.S. Senior Waste Processing Engineer for the engineering evaluation of a proposed \$60 million 650 TPD MRF and waste-energy plant. Led the engineering review of a new plant housed in a 144,000-sf steel building with novel technologies to produce two types of industry fuel from paper wastes, and biogas from digestion of food scraps in an Anaerobic Digester. The plant included a high-tech MRF to remove recyclable commodities. The review included capital costs and operating cost estimates (CAPEX and OPEX) and pricing of captured recyclables. The plant is under construction and expected to begin operation in the fall of 2018.

Waste Conversion – Organics

Organics Processing Plant Environmental Assessment, Glenn County, CA. Technical Advisor on a proposed facility for the conversion of collected municipal food scraps and other organic materials into biogas using anaerobic digestion (AD) and ultimately refined to compressed natural gas (CNG) for an on-site fueling station. The responsibilities included:

- Review the initial CEQA environmental impact assessment for the siting of the plant.
- Review the technology in the proposed processing plant and assess its potential for adverse impacts on human health and the environment, including sources and fate of fugitive odors, air emissions quantities and chemical constituents, floodplain impacts, biosolids management, spills and leaks to soil, groundwater, and nearby surface water.
- Provide conclusions and recommendations on minimizing the human and environmental impacts. Prepare a final report.

Refuse Derived Fuel (RDF) Plant, Southern California. Senior Engineer on the design and costing of a mechanical, biological treatment (MBT) facility to process MSW indoors into a RDF for use as an alternative fuel in cement kilns.

Composting

Biosolids Cocomposting, Hillsborough County, FL. PM for the expansion of a composting facility utilizing municipal biosolids and green waste. Facility will go from 2 to 7 acres. The process is a novel, EPA-approved process known as the Modified Static Aerated Pile (MSAP), which provides benefits over turned windrows, including only 2 turns of the windrow, shortened processing time, less odor production, better control of pile heating and rain absorption. The project included design of leachate controls and preparing bid specifications for mechanized turner and trommel screen. Product is sold to local farmers who till it into the soil.

Citizens Recycling and HHW Drop-Off

Citizens Waste Drop-Off Complex, Charlotte County, FL. Senior Engineer for overall planning, engineering design and construction oversight for this 10-acre state-of-the-art facility that included the following work elements:

- Demolition of entire existing site structures (the old transfer station).
- Design and permitting of a new transfer station, citizens drop-off and recycling facility covering 10 acres:
 - 4,000 sf covered household hazardous waste (HHW) drop-off and processing area.
 - Drop-off area with 4,000 sf of canopy and capacity for nine car/small trucks.
 - Disposal and parking capacity for three, 100-cubic-yard open-top loading trailers.
 - *Separation of County trucks and community traffic for safety.*
 - 4,800-sf Administration Building; consignment shop and thrift store for non-profit.
 - Separate recyclables drop-off area, including yard waste and bulky items.
 - HHW waste drop-off, covered, with two pre-fab HAZMAT storage buildings.
 - Stormwater retention on-site to protect adjacent surface waters.
- Construction phase services, including bidding, shop drawing review, testing oversight, and periodic construction oversight.

JOSE DE LA LAMA, WESTERN REGIONAL CONSTRUCTION MANAGER

Education

MS – Construction Management and Real Estate Development, Pontificia Universidad Catolica del Peru, Universidad Politecnica de Madrid, Spain

BS – Civil Engineering, Pontificia Universidad Catolica del Peru, Spain

Professional Licenses / Certifications

Professional Engineer (PE) (Peru)

Colegio De Ingenieros Del Peru (CIP) (Peru)

Professional Experience

As SCS's Western Regional Construction Manager, Mr. de La Lama is responsible for the management and execution of complex design, design-build, and construction projects in North, Central, and South America. Projects have involved land development for industrial, commercial and residential structures, including office buildings, hotels, hospitals, and residential communities, as well as infrastructure projects such as roadways, irrigation canals, pipeline systems for municipal water use, storm and sanitation sewers, pump stations, underground and elevated storage facilities, water tanks, and water and sewer treatment plants.

Since joining SCS in 2008, he has applied his significant construction expertise to SCS's Field Services-Construction division, where he has successfully performed numerous cost evaluations, construction plans, and project constructions. His hands-on construction experience and professional engineering skills have facilitated the successful completion of multiple projects related to landfill gas (LFG) collection systems, LFG treatment facilities, LFG-to-energy (LFGTE) facilities, LFG pipelines, and related site remediation and redevelopment.

Notable projects are described below.

Landfill Gas Management – 2016-2017

Republic Services, Gas Collection and Control System Improvements at the following landfills:

Roosevelt Landfill, Roosevelt, WA
Newby Island Landfill, CA
Apex Landfill, Las Vegas, NV
Sonoma Central Landfill, Petaluma, CA
Keller Canyon Landfill, Bay Point, CA

Forward Landfill, Manteca, CA
Wasatch Landfill, Utah
Apache & Southwest Regional Landfills, Phoenix, AZ
Vasco Road Landfill, Livermore, CA
Sunshine Canyon Landfill, Sylmar, CA

Value: \$12,400,000

Gas Collection and Control System, Casper Landfill, Casper, WY. This project includes 2,400 VF gas wells, 12,000 LF laterals and header collection pipe, 4 EA condensate pump stations, air and condensate FM piping, one 450 SCFM enclosed flare station, compressed air system, SCADA. Value: \$1,326,000.

Gas Collection and Control System, SWACO Franklin County Regional Landfill, Grove City, OH. This project included 2,200 VF gas wells, 12,000 LF laterals and header collection pipe, 4 EA condensate pump stations, air and condensate FM piping. Value: \$970,000.

Sulfur Removal System, Ventura Landfill Station, Paula, CA. This project included demolition of the existing containerized sulfur removal system and installation of iron sponge on fiberglass tank removal system. Value: \$480,000.

Gas Collection and Control System, Waste Management's Waimanalo Gulch Landfill in Hawaii. Value: \$395,000.

Construction Estimator (2008-2016)

Mr. de La Lama's extensive experience in the construction industry prior to joining SCS has helped him successfully estimate, win, and execute many projects for SCS related to LFG collection, treatment, and renewable energy projects, as well as other related solid waste industry projects, a few of which are noted below:

Modern Landfill Flare Station Improvements, PA	\$2,470,000
Frederick County LFGTE, Winchester, VA	\$4,428,000
Rockingham County LFGTE, Harrisonburg, VA	\$2,500,000
Seminole Landfill GCCS Phase 3, Dekalb, GA	\$2,094,000
Johnston County LFGTE, Johnston, NC	\$1,320,000
Athens Clark Landfill, LFGTE, GA	\$1,318,000
Brown Station Road Landfill Flare Station Improvements, MD	\$1,540,000
Ada County Landfill, H2S Removal System Facility, Boise, ID	\$3,233,000
Harford County DPW, Gas Collection System, MD	\$1,084,000
Dekalb County Seminole Road Landfill GCCS, GA	\$1,736,000
I-95 Landfill GCCS Reconstruction, Lorton, VA	\$1,436,000

Chief Estimator/Project Management (2004-2008)

While working for Panther Corporation in Virginia, Mr. de La Lama contributed to the company's growth from \$3 million to \$20 million in annual sales by accurately estimating and helping complete many construction projects. Working hand-in-hand with first class general contractors, including Dietze Construction Group, Bognet Construction, Avery Construction, The Keystone Group, Hubert Construction, Marion Construction, HBW Group, Signet Construction and many others, he played a key role in the completion of the following projects:

Broad Run Industrial Park	Prince William County, VA	\$5,575,000.00
Zoso-Filmore Street Building	Arlington, VA	\$3,980,000.00
American Disposal Services	Manassas, Prince William County, VA	\$417,320.00
Cascades Childcare	Sterling, Loudoun County, VA	\$345,800.00
Kamino at Dulles Trade Center	Dulles, Loudoun County, VA	\$455,000.00
Everspring Import & Export	Sterling, Loudoun County, VA	\$1,299,250.00
International Country Club	Fairfax County, VA	\$1,553,558.00
Pinebrook Professional Center	South Riding, Loudoun County, VA	\$2,219,900.00

Episcopal High School	Alexandria, Fairfax County, VA	\$527,449.00
Holiday Inn Hotel	Prince William county, VA	\$1,087,005.00
Accotink Park	Springfield, Fairfax County, VA	\$832,760.00
Koons Sterling Ford	Sterling, Loudoun County, VA	\$1,132,284.00
Haymarket Industrial Park	Haymarket, Prince William County, VA	\$575,645.00
Commerce Bank	Manassas, Prince William County, VA	\$585,130.00
Wellingford Industrial Park Lots 1,2,4	Prince William County, VA	\$982,421.00
Waterford 6715 Commerce St.	Springfield, Fairfax County, VA	\$906,984.00
Godwing Associates	Manassas, Prince William County, VA	\$596,836.00
Rainbow Childcare Center	Centerville, Fairfax County, VA	\$264,300.00
Lee Rd. Self-Storage	Chantilly, Loudoun County, VA	\$227,386.00
Church of Good Shepherd	Burke, Fairfax County, VA	\$254,720.00
Arby's Braemar Village Center	Prince William County, VA	\$237,680.00
John Marshall Building Expansion	Haymarket, Prince William County, VA	\$1,853,732.30

Project Management (2002-2003) Lima, Peru

Water & Sewage Services of Lima & Callao, Peru (SEDAPAL) to Renovate the Public Water and Sewage Systems in Callao Port.

Contract Amount: US \$18,650,000.00

Working for general contractor, Constructora Upaca, Mr. de La Lama estimated, managed, and led all daily operations on this project. He scheduled all work activities, managed materials and equipment logistics, coordinated with human resources, hired and oversaw subcontractors, and routinely liaised with client staff. He also managed budget and contract administration, generated correspondence, claims, work orders, and contract change orders, originated application for payments, and maintained all project records. He also developed and presented Technical and Economic statements to the Board of Directors.

General Contractor (1985-2002), Lima, Peru

Working for Constructora Upaca, Mr. de La Lama performed general construction work, specializing in infrastructure projects, urban development projects, commercial, industrial, institutional and residential projects.

Project Management (1995-2003)

With Constructora Upaca, Mr. de La Lama managed the development of urban projects, which included performing design coordination tasks, cost estimating, commercial presentations, and operational planning. He also managed the entire bid process for submitting proposals. He was responsible for estimating, managing, and leading all daily operations for various projects. He scheduled work activities, material logistics, coordinated human resources and equipment, and led evaluation and hiring of subcontractors. He also coordinated schedules with clients and was involved in budget management and contract administration.

Notable projects he managed or helped manage during this time included:

Construction and Renovation of Alberto Sabogal Hospital in Callao, Lima Peru.

Contract with Peruvian Institute of Social Security. Value: \$6,420,000.00.

Construction of 17-story High Rise, Costa Azul Condominium Building in Miraflores, Lima Peru.

Contract with Piffiori Investments. Value: \$4,760,000.00.

Construction of a General Storage Facility for Vehicles and Merchandise of Daewoo of Peru, in Callao Port. Value: \$3,270,000.00.

Construction of 36-Inch Main Drinkable Water Pipe Line for Callao City, Lima Peru. Contract with SEDAPAL. Value: \$4,110,000.00.

Construction of the Reinforcements of the Water System in Lima City, Areas: La Atarjea, Santa Anita, Ate Vitarte, La Molina, Canada, San Luis, Primavera. Contract with SEDAPAL. Value: \$15,725,000.00.

Construction of 48-Inch Main Sewage Collector in Callao Port. Thirty feet deep, 16-feet below the water table. Contract with public corporation for development of Callao City. Value: \$2,470,000.00.

Construction of New Water Treatment Plant for Chiclayo City, Peru.

Construction and Equipment for 150 gal/sec Output Drinkable Water. Contract with public company of water and sewage services of Lambayeque. EPSEL. Value: \$2,860,000.00.

Construction of Renovation of the Water and Sewage Systems of Piura, Sullana, Paita, Tumbes, Lambayeque cities in Peru. Contract with the National Program for Drinkable Water (PRONAP) Value: \$9,380,000.00.

Construction of the Infrastructure for Irrigation of 1,500 Acres in Area IV Lateral 10th, PUR CANAL, in CHAVIMOCHIC. Project, La Libertad State, Peru. Contract with the National Institute for Developing (INADE). Value: \$7,138,000.00.

ANDREW P. HEFFEL, SENIOR ESTIMATOR

Education

Construction Estimating Coursework, Victor Valley College, 1987

Accounting and Business Law Coursework, California Lutheran College, 1978

AA – Sociology, Ventura College, 1974

Professional Experience

Mr. Heffel has successfully estimated scores of winning projects in his 23 years at SCS. He has 34 years of construction experience involving landfill gas (LFG) collection systems, methane protection systems for buildings, landfill closure projects, LFG-to-energy projects, groundwater pump and treat systems, landfill leachate treatment and control systems, LFG compressor stations, landfill flare stations, landfill anaerobic digester systems, landfill composting projects, and LFG pipeline projects. Mr. Heffel was Vice President and general partner in a construction company specializing in LFG collection systems from 1984 to 1992. His background includes project management, estimating, field superintendence, business development, and purchasing.

As the senior estimator and estimating manager for SCS Field Services, Mr. Heffel has developed cost and construction strategies for numerous and varied projects, including design-build projects with various SCS engineering offices and hard bid municipal and private projects. Other duties include writing proposals, managing the estimating department, value engineering, maintaining bid statistics, and preparing engineering estimates. He frequently works with SCS engineering offices on special projects involving landfill-related costs.

Mr. Heffel also maintains and updates a database of average unit prices for various components of typical LFG collection systems, allowing SCS to determine the approximate value of such systems. Other duties include managing SCS's national construction equipment rental accounts with three national rental companies, which provide SCS with competitive equipment rental rates across the country.

Construction Estimation and Construction Contracts

SCS's estimating department prepares approximately 150 bids and proposals per year, with an estimated annual value of \$50,000,000. Of this total, SCS wins between \$15 million and \$20 million in construction contracts.

The following recent projects were estimated and won through efforts of Andy and other SCS estimators nationwide:

Total Construction Wins For 2017 Through October 31

Fairfax County Drilling I-95	\$78,720.00
Howard County - Alpha Ridge Landfill Gas System	\$389,008.00
Volusia County 2017 GCCS Expansion	\$281,796.00
Augusta GA, 2017 GCCS Expansion	\$653,023.10

Total Construction Wins For 2017 Through October 31

City of Waco River Front Remediation	\$62,729.23
WMI Pump and Treat a Chemical Waste Valley Center	\$460,703.00
SWACO Landfill 2017 Landfill Gas System Expansion	\$967,610.00
Houston County Landfill 2017 Landfill Gas System Expansion	\$611,189.00
Pavement Repairs at Gardena # 5, Carson, CA	\$346,000.00
Countyline Commerce Park - Flagler Global Logistics DBA Countyline LLC	\$2,199,721.60
Rockingham County LFG Modification 2017	\$288,245.00
Blue Source upgrades	\$183,000.00
ENI - Surcharge	\$151,000.00
HPB 2017 Tank Expansion Design Build with SCS Engineers	\$1,200,000.00
SWA of Palm Beach County	\$883,139.00
Fairfax County 2017 Drilling I-94 and 66	\$140,000.00
Waste Connections, Denver Regional 2017 Drilling	\$50,000.00
Cumberland County, NC - Design Build	\$408,000.00
Region 2000 LFG Design Build	\$200,000.00
SWA of Palm Beach County Liner Repair Project	\$9,881.00
Waste Management Lockwood Drilling	\$49,800.00
Waste Management - Crossroads Landfill GCCS Expansion	\$125,000.00
Nineteen Republic Services Landfill Gas Collection System Projects Awarded to SCS in 2017	\$7,284,390.00
Total	\$17,022,954.93

AMBROSE A. MCCREADY, PE

Education

BS – Civil Engineering, California State University, Sacramento; 1972

Professional Licenses

Professional Engineer: California, Colorado, Washington

Qualified Storm Water Developer (QSD): California

Professional Affiliations

American Society of Civil Engineers (ASCE)

Solid Waste Association of North America (SWANA)

Professional Experience

Mr. McCready has over 40 years of engineering experience. Throughout his career he has specialized in the planning, design and construction management of solid and hazardous waste landfills and environmental remediation systems. His experience includes the planning and design of compost facilities. Mr. McCready has provided engineering services to clients throughout the United States and several foreign countries.

His experience has included projects subject to review and approval by Regional Water Quality Control Boards throughout California, the U.S. Environmental Protection Agency (EPA), U.S. Army Corps of Engineers (USACE), and the Atomic Energy Commission (AEC).

Examples of his project experience include:

Compost and Related Facilities

Mr. McCready has managed a number of projects involving the planning, design, and construction of structures including buildings, concrete pads, compost facilities, roads, and drainage structures.

Compost Facility, Sonoma County, CA. Lead technical engineer for evaluation for zero discharge requirement by RWQCB for the Compost Operation at Sonoma Central Disposal Site located in Sonoma County, California. Preparing implementation plan to meet the zero discharge requirement.

Fort Collins, CO. Prepared preliminary compost facility layout and sizing to meet processing requirement of 10 TPD using open windrow process.

Oroville Landfill Properties, Oroville, CA. Prepared compost facility layout and processing plans for 20 TPD open windrow process. Included analysis and design of storm water and drainage facilities.

Cold Creek Compost Facility, Ukiah, CA. Designed compost pad improvements and retention basin to capture storm water runoff from compost operation.

Design of Storm Water Drainage Improvements at Transfer Station, Auburn, CA. Project included modifications to drop inlets, addition of a sediment trap, and large-scale sand filtration basin.

Preparation of NOI and SWPPP for Landfill Gas (LFG)-to-Energy (LFGE) Plant, Paradise, CA. Prepared a construction Storm Water Pollution and Prevention Plan (SWPPP) for a generation facility located at Neal Road Landfill. The SWPPP was implemented during construction and has been terminated.

Civil Engineering for Transfer Station, Oroville, CA. Performed civil engineering for storm water drainage facilities at a transfer station in Oroville that was experiencing exceedances in allowable discharge parameters. Prepared recommendations for correcting exceedances, designed modifications, and observed construction. Modifications included zero discharge sedimentation basins, berms to divert runoff, and sand filters to remove sediments from the discharge.

Civil Engineering for Storm Water Drainage Facilities, Marysville, CA. Performed civil engineering for storm water drainage facilities at a transfer station in Marysville that was experiencing exceedances in allowable discharge parameters. Prepared recommendations for correcting exceedances, designed modifications, and observed construction. SCS designed improvements to combine discharge points into single discharge.

Drainage Structures, Various Landfill Sites. Project manager for the design and construction of concrete and rock drainage facilities to control and collect runoff from paved and unpaved sites including solid waste transfer stations and material recovery facilities.

Household Hazardous Waste Facility, Island of Guam. Project manager for conceptual design and operations plan for a Household Hazardous Waste Facility and material recovery facility on the Island of Guam.

Mr. McCready is the author of 15 technical papers on synthetic liner applications for surface impoundments, and solid and hazardous waste landfill expansions and closures.

JONATHAN J. MERONEK, IGP-TOR, QISP, CPESC, CISEC, QSP/D

Education

BA – Political Science, Arizona State University, 1990

Professional Licenses/Certifications

California Industrial General Storm Water Permit Trainer-of-Record (ToR No. 162)

Qualified Industrial Storm Water Practitioner (QISP No. 00162)

Certified Professional in Erosion and Sediment Control (CPESC No. 8298)

Certified Inspector of Sediment and Erosion Control (CISEC No. 1359)

California Qualified Storm Water Pollution Prevention Plan Practitioner (QSP No. 24695)

Occupational Safety and Health Administration (OSHA) Hazardous Waste Operations and Emergency Response (HAZWOPER) 40-Hour Training

8-Hour Annual Refresher (29 CFR 1910.120)

Professional Organizations

California Storm Water Quality Association (CASQA); 2015-17 Industrial Stormwater Subcommittee; 2015-17 Conference Subcommittee

Solid Waste Association of North America (SWANA)

Water Environment Foundation (WEF)

Engineering Contractor's Association (ECA)

Industrial Environmental Association (IEA) San Diego

Professional Experience

Mr. Meronek has been with SCS for 15 years and is a current State of California Industrial Storm Water Permit Qualified Industrial Storm Water Practitioner (QISP) and a QISP Trainer-of-Record (ToR) under the new Industrial Permit (IGP). Under the 2015 Industrial General Permit, he has performed Site Best Management Practice (BMP) and Pollutant Source Assessments, written Storm Water Pollution and Prevention Plans (SWPPPs), and implemented Monitoring Implementation Plans (MIPs) for over 40 facilities throughout California. He has performed National Pollutant Discharge Elimination System (NPDES) storm water services for state, municipal, and private clients across a vast cross-section of industrial sectors, including recycling (metal and scrap), Material Recovery Facilities (MRFs), landfills (including Subchapter N/ELG facilities), compost facilities, deep ocean ports, haulers and transportation facilities, asphalt batch plants, CalTrans sites, construction material facilities, petroleum bulk plants, landfill gas-to-energy (LFGTE) plants, quarries, concrete

and rebar manufacturers, lumber facilities, and breweries and wineries (including the 5th Largest Case and Fulfillment Center in North America). Mr. Meronek has successfully worked with LRPs, facility managers, and attorneys to comprehensively reevaluate facilities for NPDES compliance using technology-based BPT/BCT/BAT implementation for control of pollutants in stormwater discharge.

Stormwater

Project Manager, Alameda County Industries (ACI) (3 Facilities); Peninsular Sanitary, Stanford University; Mission Trail Waste Systems (MTWS) Material Recovery Facilities (MRFs) and Transfer Centers

Mr. Meronek was brought in by Alameda County Industries in 2014. The goal and purpose of the Program was to assist new ownership/staff in becoming compliant under the new 2015 Industrial General Permit Regulations as it applied to their Material Recovery Facilities MRFs (SIC 5093). Mr. Meronek provided stormwater services by reviewing the current Permit, performing pollutant source assessments and performing preliminary non-stormwater discharge (NSWD) inspections.

West Marin Compost (WMC), Marin Carbon Project (MCP), Nicasio, California.

Provided Industrial Stormwater Compliance assistance including SWPPP, water quality monitoring and WDR Requirement assistance for a large composting operation in Marin as part of the Marin Carbon Project (MCP) to enhance carbon sequestration in California rangeland, agriculture and soils and the reduction of (GHG). Mr. Meronek works closely with the current owners in a highly sensitive watershed area, including Total Maximum Daily Load (TMDL) water quality standards. Mr. Meronek is an active member of the MCP Water Quality technical committee and has met with State Water Resources Control Board (SWRCB) and CalRecycle on their behalf in an effort to reduce and/or eliminate pollutants in stormwater discharge.

Western Placer Waste Management Authority (WPWMA) Western Regional Sanitary Landfill (WRSL) and Composting Operations– Industrial General Permit Stormwater Support

Provided industrial stormwater compliance support for large landfill, MRF, transfer center and composting operations; provided assessment and recommendations under Numeric Action Limit (NAL) Exceedance Response Action (ERA) Level 2 Reporting.

Project Manager, Calpine Energy – Energy Centers/Facilities throughout California (8 Facilities)

Provided Industrial Stormwater compliance and assistance with Industrial Permit auditing for Calpine Energy, a premier and large-scale sustainable energy fleet. Services included review of ERA Level 1 Assessments, SWPPPs, MIPs and SMARTs Reporting. Provided QISP training statewide to seven (7) large Power Generation Facilities, including Exceedance Response Action Level 1 Facilities.

MICHAEL O'CONNOR

Education

BA – Biology, University of California, Santa Cruz, 1986

Professional Affiliations

Air and Waste Management Association (AWMA)

Professional Experience

Mr. O'Connor is a Senior Project Professional and Project Manager with SCS. He has worked in the environmental field for over 16 years. His experience includes air quality compliance and permitting, California Environmental Quality Act (CEQA) services, soil and groundwater remediation, and environmental site assessment (ESA). He has served as a Project Manager for air quality compliance, permitting, and reporting for many California landfill clients and landfill gas-to-energy (LFGTE) development clients, including private companies and several municipalities and counties. He has extensive knowledge of applicable federal, state, and local air quality regulations, greenhouse gas (GHG) regulations, and CEQA requirements. Mr. O'Connor has assisted clients in numerous regulatory jurisdictions within California, including the San Joaquin Valley Air Pollution Control District (APCD), the Bay Area Air Quality Management District (AQMD), and the Sacramento Metropolitan AQMD, as well as in Colorado, Utah, Arizona, and New Mexico.

His project experience is summarized below.

Air Quality Permitting for Composting Operations. As Project Manager, Mr. O'Connor has been responsible for permitting projects that involved windrow composting, covered aerated static pile (CASP) composting, and in-vessel composting at Title V sites in the Bay Area AQMD, the Yolo-Solano AQMD, and the San Joaquin APCD. Services have included preparation of air applications (including Best Available Control Technology [BACT] determinations with cost-effectiveness evaluation and offset requirements), and CEQA approval support for the following clients/sites:

- Waste Connections, Inc. (Potrero LF)
- Republic Services, Inc. (West Contra Costa Sanitary LF, Forward LF)
- Waste Management of Alameda County (Altamont LF, Redwood LF)
- Northern Recycling (Yolo Central LF)

Air Quality Permitting for Anaerobic Digester and Biogas Projects/Facilities. As Project Manager, Mr. O'Connor is currently responsible for permitting anaerobic digester project for Yolo County at the Yolo Central LF site. This project includes several AD cells as well as one, large liquid waste digester pond. The project calls for producing biogas for combustion in the site's existing biogas to energy facility. In addition, Mr. O'Connor has done air permitting of digester gas treatment and combustion equipment for the City of Fresno's regional wastewater treatment facility, and air permitting of a landfill gas to liquefied natural gas facility for Waste Management's Altamont LF. Services for these

Title V sites have included preparation of applications for authorities to construct (including BACT determinations, offset requirements, and CEQA support).

Air Quality Compliance, Permitting, and Reporting for Landfill and Waste Transfer Station Sites.

As Project Manager, Mr. O'Connor has extensive knowledge of applicable federal, state, and local air quality regulations, including Bay Area AQMD rules. Permitting tasks have included determination of BACT, Prevention of Significant Deterioration (PSD), and offset requirements, as well as CEQA support for numerous Title V sites. Reporting and compliance activities involved both federal and state GHG regulations, and other federal and state air quality regulations. Clients have included:

- Republic Services, Inc.
- Waste Connections, Inc.
- Waste Management, Inc.
- Sonoma County
- City of Palo Alto
- City of Berkeley
- City of Burlingame
- City of Sunnyvale
- City of Mountain View
- Tulare County
- Sacramento County
- Butte County
- Lake County
- Stanislaus County
- Santa Cruz County
- Merced County
- City of Clovis
- City of Sacramento

Air Quality Permitting for LFGTE Facilities. As Project Manager, Mr. O'Connor has been responsible for permitting and compliance for several sites, including Title V sites in several regional California Air Quality Districts, including the Bay Area AQMD. Services involved preparation of ATC applications, including determination of BACT, PSD, and offset requirements, and CEQA approval support. Clients/sites have included:

- Ameresco, Inc. (Keller Canyon LF, Vasco Road LF, Ox Mt. LF, Forward LF)
- G2 Energy (Hay Road LF, Ostrom Road LF)
- Toro Energy (Cold Canyon LF, Baker Commodities)
- Waste Management Renewable Energy (Redwood LF, Guadalupe LF, Kirby Cyn LF)
- Potrero Hills Energy Producers. LLC (Potrero Hills LF)
- Yolo County (Yolo Central LF)

SUZANNE STURGEON

Education

BS – Columbia Southern University, Occupational Safety & Health Management (*Pending*)

AA – Liberal Arts, Long Beach City College, 1983

Specialty Certifications

Certified Safety Management Specialist, CSMS

Authorized OSHA Outreach Instructor – Construction Industry

Authorized OSHA Outreach Instructor – General Industry

16-Hour Confined Space Entry Training

Emergency First Responder CPR, AED and First Aid Instructor Trainer

SCS Standards of Business Conduct & Ethics

SCS Health and Safety Program and Requirements Trainer

John Zink Institute Landfill Flare Training Course – LF105 (2014)

Professional Affiliations

Solid Waste Association of North America (SWANA)

SWANA National Safety Committee

The American Society of Safety Engineers (ASSE)

Professional Experience

Ms. Sturgeon is the Health and Safety (H&S) Program Manager for SCS Energy and SCS Field Services. In this role, she is responsible for program development and implementation, including all operational and administrative policies and procedures. She monitors all field and administrative projects to be sure that they comply with company, industry, and regulatory standards. She manages H&S training efforts, and develops and conducts cultural-based training within the company to promote understanding and participation at all levels, while encouraging a behavior-based philosophy essential to eliminating unsafe practices and conditions. Ms. Sturgeon conducts on-site safety assessments and provides incident analysis and feedback of all reported incidents and near misses as a means of promoting a proactive safety culture.

For this project she will serve as H&S Officer. As such, she will be responsible for overseeing the development and implementation of the site-specific H&S Plan for the facility, conducting safety site visits, and providing safety training as needed.

Some of the currently operating biogas projects she has been involved in include:

University of New Hampshire, Landfill Gas to High-Btu Gas Facility Operation. SCS Energy operates and maintains a 6,000-scfm inlet landfill gas to high-Btu gas facility at the Turnkey Landfill in Rochester, New Hampshire. After SCS Energy conducted a feasibility study, we designed and constructed the project. The facility converts landfill gas to pipeline quality gas utilizing membrane separation technology. The product gas transmitted via a dedicated pipeline to the University's on-campus turbine power plant. The project also includes a 3.2-MW landfill gas-to-energy facility to power the high-Btu plant. The power generation facility uses two Caterpillar G3520C gensets.

BioFuels Energy, LLC, Digester Gas to High-Btu Gas Facility Operation. SCS Energy operates and maintains a 1,110-scfm inlet digester gas to high-Btu gas facility located at the Point Loma WWTP in San Diego, California. The facility was designed and constructed by SCS Energy. The facility converts digester gas to pipeline quality gas utilizing membrane separation technology. The product gas is injected into the local natural gas utility distribution network, where it is transported to the University of California, San Diego to fuel a fuel cell power generation facility. The digester gas facility also fuels an on-site fuel cell to provide power to run the facility.

University of California, Los Angeles, LFGE Medium-Btu Direct-Use Operation. SCS Energy operated and maintained until this year a Medium-Btu direct-use facility that dehydrates, treats, compresses, and conveys LFG from the Mountaingate Landfill through a dedicated 4.5-mile pipeline from the Landfill to the University of California at Los Angeles (UCLA). The plant used Selexol, which is also used in High-Btu plants, to supply clean Medium-Btu LFG to UCLA for co-firing with natural gas in UCLA's combustion turbine combined cycle cogeneration facility. The UCLA application requires ultra-pure landfill gas since UCLA's cogeneration facility employs post-combustion SCR and oxidizing catalysts for advanced NOx and CO air emissions control.

Manatee County, Florida, LFGE Facility Design, Construction, and Operation. SCS Energy designed, constructed, and is operating a 1.6-megawatt (MW) landfill gas-to-energy facility at the County-owned Southwest Wastewater Treatment Plant in Bradenton, Florida. The facility uses LFG from the adjacent Lena Road Landfill to fuel one Caterpillar G3520C reciprocating engine generator set (genset) to generate power to be used in the WWTP.

Oregon Environmental Industries, Inc., LFGE Facility Operation. SCS Energy operates and maintains a 3.2-MW landfill gas-to-energy facility at the Dry Creek Landfill in Central Point, Oregon. The facility was designed and constructed by SCS Energy.

PATRICK S. SULLIVAN, BCES, CPP, REPA

Education

BA – Harvard University, Biology/Ecology, 1989

Professional License/Certifications

Board Certified Environmental Scientist, No. 15-ES009, American Academy of Environmental Engineers & Scientists (AAEES)

South Coast Air Quality Management District (SCAQMD), Certified Permitting Professional (No. A-1716)

Registered Environmental Property Assessor, No. 519692, National Registry of Environmental Professionals (NREP)

Approved Lead Verifier under California Air Resources Board (CARB) AB 32 Greenhouse Gas (GHG) Program, Executive Order H-15-137

Professional Affiliations

Solid Waste Association of North America (SWANA); Vice Director, Landfill Gas (LFG)/Biogas Division

Air and Waste Management Association (AWMA); Vice Chairman, Mother Lode Chapter

Waste Industry Air Coalition (WIAC); Co-Chairman

California Biomass Collaborative; Executive Board

Solid Waste Industry for Climate Solutions (SWICS), Co-Chairman

Research Associate, Columbia University, Earth Engineering Center for Sustainable Waste Management

Solid Waste Industry Group in California

Technical Advisory Group; Cal Recycle, LFG

Technical Advisory Group, CARB, AB 32 Landfill Methane Rule

Society for Risk Analysis

Professional Awards

Certificate of Excellence, Publication of over 100 Articles and Presentation, SCS Engineers (SCS), 2015

Distinguished Service Award, National Solid Waste Management Association (NSWMA, now National Waste and Recycling Association, NWRA), 2009

Hall of Flame, SWANA, LFG/Biogas Division, 2007

Certificate of Achievement, Inspiring Leadership, SCS, 2007

Certificate of Appreciation, Speaker, Post-Closure Land Use Symposium, California Integrated Waste Management Board (CIWMB, now Cal Recycle), 2006

Professional Experience

Mr. Sullivan has over 27 years of experience in the area of environmental engineering, specializing in solid waste management and other environmental issues. He is the Managing Director of SCS's consulting and engineering operations within the Southwestern United States, the largest of SCS's engineering business units. He also serves as the Practice Leader for SCS's Solid Waste Practice in the same region. Mr. Sullivan is the National Expert for SCS's companywide Clean Air Act program. He also oversees SCS's company-wide GHG and Risk Assessment programs and is one of the national experts on risk assessment and toxic exposure issues for solid waste facilities. Mr. Sullivan is a company Senior Vice President and Member of the Company's Management Advisory Committee. He is also Principal-in-Charge for projects related to solid waste facility permitting and compliance as well as related engineering services. Mr. Sullivan has published and/or presented over 100 technical papers in industry journals, publications, conferences, seminars, and workshops.

Because of this expertise, Mr. Sullivan has been involved with the following practices and projects related to composting and anaerobic digestion (AD) projects:

Air Quality

Permitting of Composting Operations. Mr. Sullivan has been the project manager for the air quality and other environmental permitting for over 15 composting facilities in the western U.S. He also managed 5 odor evaluations for composting facilities, including ambient air testing, air dispersion modeling, siting of meteorological stations, odor panel participation, and testimony at public meetings.

Preparation of Numerous Local Air District, State, and Federal Permitting Documents for the installation of air pollution control devices and industrial equipment, including composting equipment, engines, turbines, carbon adsorption systems, boilers, cooling towers, air strippers, wastewater treatment plants, biogas collection systems and flares, biogas recovery plants, and various industrial systems. Mr. Sullivan has managed over 150 state or local air permitting projects for solid waste and industrial facilities.

Permitting, Compliance, and Due Diligence Projects for Renewable Energy Projects throughout the United States. Mr. Sullivan has completed technical and financial due diligence for over 75 existing and proposed projects, as well as permitting and compliance activities for over 100 facilities. Some of these projects have also included registration of GHG credits, facilitation of trades for GHG credits, and development of methodologies for estimation of GHG reductions as well as all of the air quality permitting tasks. Mr. Sullivan has permitted over 40 biogas to energy plants across the country.

Air Quality and Risk Assessment Sections of Environmental Impact Reports (EIRs) for approximately 50 solid waste projects, including AD facilities, composting operations, landfill expansions, new landfills, transfer stations, material recovery facilities (MRFs), other solid waste facilities, and various commercial/industrial projects in California, including evaluations of health risks, air quality, GHG, and/or odors. This has included the preparation of a variety of California Environmental Quality Act (CEQA)/National Environmental Policy Act (NEPA) documentation.

Completed Landfill Air Quality Services in the Following States and Air Districts: SCAQMD, San Joaquin Valley Air Pollution Control District (APCD), Bay Area Air Quality Management District (AQMD), Sacramento Metropolitan AQMD, San Diego County APCD, Yolo-Solano AQMD, Feather River AQMD, Kern County APCD, Ventura County APCD, Santa Barbara County APCD, Shasta County APCD, Antelope Valley APCD, Mojave Desert AQMD, Placer County APCD, North Coast Unified AQMD, Butte County APCD, and El Dorado County APCD. States of Nevada, Oregon, Washington, Hawaii, Arizona, Idaho, Montana, New Mexico, Colorado, Utah, Texas, Ohio, Pennsylvania, Florida, Arkansas, Illinois, Kansas, Virginia, Oklahoma, and several others.

Odor Evaluations

Air Quality and Odor Analysis for proposed municipal solid waste (MSW) landfill and composting operation in Mariposa County, CA.

Air Quality and Odor Analysis, including ambient air testing and air dispersion modeling, for MSW landfill, composting facility, and materials recovery facility (MRF) in Placer County, CA.

Odor Analysis for proposed MRF in San Bernardino County, CA.

Compliance Review and Odor/Air Quality Impact Assessment for existing composting operation in San Diego, CA, which is adjacent to a proposed residential development.

Development of Expert Report and review of opposing experts' work on air quality and odor analyses of a composting facility in Adelanto, CA.

Air Quality Permitting and Compliance, including Odor Analyses, for landfills and composting facilities in Vacaville, Milpitas, and Novato, CA.

Greenhouse Gas

CAR GHG Project Reduction Services

Organic Waste Composting Protocol

- American Organics OWC
- Grover Environmental Products
- Jepson Prairie Organics
- South Valley Organics

GHG Consulting. Provided GHG consulting services for Sacramento County, Los Angeles County, City of Carlsbad, City of Alameda, the City of Palo Alto, and virtually all of the major solid waste companies. Acted as the primary consultant supporting the membership of the SWICS group.

SWICS Group. Involvement with the leadership of the SWICS group. As part of this effort, Mr. Sullivan has developed protocols for solid waste facility GHG emission estimates and led SWICS advocacy efforts on the proposed AB32 scoping plan, early action rules, cap and trade, as well as the AB32 and federal GHG mandatory reporting rules.

Private Waste Company GHG Consulting. Provided GHG consulting for all of the large private waste management companies.

Selected Publications and Presentations

Sullivan, Patrick S., Where Should I Put My Organic Waste: Bioreactor Landfill or Composting Facility, Conference Proceedings, NSWMA/EIA Waste Expo, Las Vegas, Nevada, May 2005.

Sullivan, Patrick S., Comparison of Air, Health, and Odor Impacts from Landfills vs. Composting, Presentation at the Annual SWANA WASTECON Conference, St. Louis, Missouri, September 2005.

Sullivan, Patrick S., Air Quality Issues for Composting Facilities, Presentation at the 38th Annual SWANA Western Regional Symposium, Seaside, California, May 2009.

Huff, Raymond H., and Sullivan, Patrick S., Carbon Footprint and Impact of Biosolids, Presentation at CWEA's "Government Affairs: Global Climate Issues" Specialty Conference for the Cities of Whittier and Roseville, California, June 2008.

Sullivan, Patrick S., Greenhouse Gas Regulations, Programs, and Reporting, Presentation to Clark County Department of Air Quality and Environmental Management, Las Vegas, Nevada, January 27, 2009.

Sullivan, Patrick S., Global Setting: Waste Management's Response to Climate Change, Presentation for SWANA WASTECON Conference, Long Beach, California, September 2009.

Sullivan, Patrick S., AB 32/Scoping Plan Impact on Solid Waste Industries and Local Governments, Presentation at the Southern California Waste Management Forum Annual Conference, Ontario, California, November 2009.

Sullivan, Patrick S., Comparison of Landfilling and Organic Waste Diversion in Terms of Air Quality and GHG Impacts, Presentation at the 39th Annual SWANA Western Regional Symposium, San Luis Obispo, California, April 2010.

Sullivan, Patrick S., Comparison of Air Quality and GHG Impacts from Organic Waste Disposal, Presentation for AWMA Golden West Chapter Annual Technical Conference, Bakersfield, California, May 2011.

Sullivan, Patrick S., Impacts from Organic Waste Management, AWMA Mother Lode Chapter Meeting, Sacramento, California, September 2011.

Sullivan, Patrick S., Air Quality Requirements for Composting Facilities are Changing—Are You Ready?, 41st Annual SWANA Western Regional Symposium, April 2012.

Sullivan, Patrick S., The Implications of California Air Regulations on Composting Facilities, Presentation at the U.S. Composting Council Annual Conference, Oakland, California, January 2014.

Sullivan, Patrick S., Comparison of Air Quality and GHG Benefits/Impacts for Organic Waste Diversion Options, Presentation at Waste Expo, Las Vegas, Nevada, June 2015.

ROBERT D. VIERS, PE

Education

BS – Mechanical Engineering, California State University, Long Beach, 1990

Professional Licenses

Professional Engineer (Mechanical) - Arizona (48242); California (M028717); Florida (P.E. 70021); Georgia (PE031135); Idaho (14186); Kentucky (32160); Louisiana (39237); Maryland (3587642); Missouri (PE2006028560); Montana (18663); New Hampshire (11872); New Jersey (GE 047099); North Carolina (035595); Oregon (78321PE); Pennsylvania (PE072598); South Carolina (27351); Texas (99777); Utah (9127845-2202); Wisconsin (40412-6)

Professional Experience

Biogas to Energy

Mr. Viers joined SCS in 2004. He has been Project Manager and Lead Design Engineer for the following projects:

Waste Management, Inc., Design of a Landfill Gas (LFG) Treatment Facility, Outer Loop Landfill, Louisville, KY. Design of a 5,000-standard-cubic-feet-per-minute (scfm) LFG-to-high-Btu gas plant employing membranes for carbon dioxide removal and pressure swing adsorption for nitrogen removal.

University of California Office of the President, Design of LFG Treatment Facility, Shreveport Landfill, Shreveport, LA. Thirty percent design of a 2,800-scfm LFG-to-high-Btu gas plant. The facility would have converted landfill gas to pipeline quality gas utilizing pressure swing adsorption process for carbon dioxide removal. Concept was changed to employ membranes for carbon dioxide removal. Supervised the complete design of this alternative approach. Design/build project.

Orlando Utilities Commission. Expansion of a 4,000-scfm LFG processing facility to 8,000 scfm. Performed on a design/build basis. The project employs multistage centrifugal blowers, flooded screw compressors, and R-134 based refrigerant system.

BioFuels Energy, LLC, Design of a Digester Gas Treatment Facility, Point Loma Wastewater Treatment Plant, San Diego, CA. Design of a 1,200-scfm digester gas-to-high-Btu gas plant. Facility converted digester gas to pipeline quality gas utilizing membrane separation technology. Gas is injected in to the local natural gas utilities distribution network. Design/build project.

City of Fresno, Design of a Digester Gas Treatment Facility, Fresno/Clovis Wastewater Reclamation Facility, Fresno, CA. Design of a 1,500-scfm digester gas-to-high-Btu gas plant. Facility converted digester gas to pipeline quality gas utilizing membrane separation technology. Gas is combusted in an on-site gas turbine, offsetting natural gas consumption. Design/build project.

Metrogas, S.A., Design of a Digester Gas Treatment System, La Farfana Wastewater Treatment Plant, Santiago, Chile. Design of a 2,300-scfm digester gas-to-high-Btu facility in Santiago, Chile. The facility produces pipeline quality gas for distribution to Metrogas customers. Work included

process design, equipment specification and selection, detailed construction drawings, and start-up supervision.

Chevron Energy Solutions Company, Design/Construct of an LFG-to-Energy (LFGTE) Facility, Marine Corps Logistics Base, Albany, GA. Design and construction of a 1.9 MW LFG utilization facility. The project incorporates a 1,000-scfm LFG compression and chiller skid, an LFG transmission pipeline, and a 1.9 MW reciprocating engine/generator set. The facility will also produce steam from the engine exhaust and has supplemental LFG-fired boilers. The facility is the first LFG fuel cogeneration plant at a Marine base in the United States.

Orlando Utilities Commission. Design and construction of a 4,000-scfm LFG processing facility. The project employs multistage centrifugal blowers, flooded screw compressors, and R-134 based refrigerant system.

Confidential Client, Design of an LFGTE Facility, Leola, Pennsylvania. Design of an 11.8-MW LFG utilization project. The project employs two Solar Taurus combustion turbines and waste heat recovery boilers which produce 60,000 pounds per hour of steam.

University of New Hampshire, Design of LFG Processing Facility, Rochester, NH. Design of a 6,000-scfm high-Btu landfill gas processing plant. The facility utilizes multiple stages of compression and gas cleaning to obtain high-Btu LFG for use in the client's combined cycle power plant. Equipment included non-regenerative hydrogen sulfide removal (SulfaTreat), pressure swing adsorption and temperature swing adsorption. The facility also includes 3.2 MW of on-site power generation to support on-site loads. Design/build project.

Metrogas, S.A., Design of a Digester Gas Cleanup Facility, La Farfana Wastewater Treatment Plant, Santiago, Chile. Design of a 2,500-scfm digester gas cleanup and compression facility for Metrogas, S.A. in Santiago, Chile. The facility compressed and dehydrated 2,500 scfm of digester gas before sending it down a 3-mile pipeline to the town Gas Works. The fuel is used in a reforming process to produce town gas. Responsibilities included process design, equipment specification, and start-up supervision.

Prior to joining SCS, Mr. Viers was employed by a company that designed, manufactured and provided maintenance services for customized mechanical skids and mechanical packages for a wide range of industries. His responsibilities included review of proposals from bidders and subcontractor's submittals for compliance with project specifications, codes and regulations, and company standards; equipment inspections during fabrication; management of personnel; preparation of project budgets; equipment commissioning; and technical support and specifications. Fabricated packages utilized positive displacement blowers, sliding vane compressors, multi-stage centrifugal blowers, pumps, liquid ring vacuum pumps, and other rotating equipment used in the environmental, power, water and wastewater treatment, flash-freezing, and commercial sectors.

Profession Qualifications

Tim O'Neill, MSME
President, ECS



engineered**COMPOST**systems

Tim is President and founder of ECS (1999 to present), co-founder and past Vice President of Green Mountain Technologies (1992-1999). During his 25 years in the compost industry he has worked as a researcher, product developer, facility designer, and a process improvement consultant. He has led ECS's efforts to design, build and support over 50 large scale composting facilities worldwide. He has also led ECS's technical service efforts to provide varying combinations of compost engineering, air emission mitigation strategies, and process improvement to over 100 scale composting facilities. Tim is recognized in North America as a technical expert in compost processing and in the design of large scale facilities. He instructs classes in compost facility design and odor control for the US Composting Council's and the Washington Organic Recycling Council's operator training programs. He also frequently speaks at compost related conferences and contributes to industry publications on science-based compost process related topics.

EDUCATION

University of Washington, Bachelors of Science in Mechanical Engineering, 1981
University of Washington, Masters of Science in Mechanical Engineering, 1985

CERTIFICATIONS

The U.S. Compost Council Certified Compost Facility Operator, 1998

PROFESSIONAL AFFILIATIONS

Northwest Biosolids Management Association
Washington Organic Recycling Council
US Composting Council
Composting Council of Canada

SELECTED PUBLICATIONS

Aeration Floor Fundamentals. Part I, Craig Coker and Tim O'Neill, BioCycle June 2017, Vol. 58, No. 5, p. 30

Composting Aeration Floor Functions And Designs Part II, Craig Coker and Tim O'Neill
BioCycle July 2017, Vol. 58, No. 6, p. 28

A Review of Pile Covers. A technical review of what they can and cannot do. Tim O'Neill, ECS
Waste Expo 2017, New Orleans LA

Post-Mortem Facility Odor Analysis. Using Comprehensive Process Data to Improve Operations.
Tim O'Neill, BioCycle Annual Conference 2015, Portland OR

Benefits of Intensive Compost Process Management. Tim O'Neill, US Composting Council 21st Annual Conference, Orlando FL, January 2011

Improving Energy Efficiency of Negative Aeration Composting Systems. BioCycle Annual Conference, San Diego, CA, April 2011

Composting of Anaerobic Digestate - Challenges and Opportunities. F. Timothy O'Neill & Mark Gould, US Composting Council 19th Annual Conference, Santa Clara, CA, January 2011

Composting in the CA Central Valley: Examining the Interdependencies of Controlling Air Emissions. Evaporative Water Loss, and Compost Quality. US Composting Council 17th Annual Conference and Trade Show, January 2009, Houston, TX

Darren Wiemeyer
4920 Hansen Drive
Santa Rosa, CA 95409
dwiemeyer@hotmail.com

Darren Wiemeyer – Biologist

EDUCATION

Humboldt State University, Arcata, California – Bachelor of Science Degree in Wildlife, emphasis in Natural Resources Planning, December 1995.

PROFESSIONAL EXPERIENCE

Darren Wiemeyer has worked in the biological field since 1993 and has a variety of experience providing biological consulting services for projects in many regions of California and southern Oregon. Mr. Wiemeyer specializes in wetland delineations, biological studies, special-status species surveys and habitat assessments, habitat restoration and monitoring, mitigation and conservation banking, regulatory permitting and resource planning, biological construction monitoring and storm water compliance.

Mr. Wiemeyer has worked on numerous projects requiring wetland delineations, biological assessments, special-status plant surveys, wildlife habitat assessments, regulatory permitting and compliance and oversight. He has experience in preparation of biological portions of CEQA initial study and EIR documents. Additionally, Mr. Wiemeyer is fluent in the use of Trimble GPS field surveying equipment and the California Natural Diversity Database (CNDDB) Program for status and locations of special-status plants and animals in California.

Mr. Wiemeyer has experience performing surveys and implementing mitigation measures for numerous wildlife species including California tiger salamander, California red-legged frog, foothill yellow-legged frog, northwestern pond turtle, burrowing owl, desert tortoise, spotted owl, marbled murrelet, and various birds of prey and native birds. He has experience with mitigation planning and regulatory consultation assistance for several federally listed plant and animal species.

He has worked on various aspects of several wetland and stream mitigation and restoration projects and several mitigation and conservation banks in Sonoma County and the Central Valley. He has worked on several construction projects providing environmental and storm water compliance, construction biological monitoring, and sensitive habitat monitoring and reporting.

Mr. Wiemeyer has experience in preparation of Storm Water Pollution Prevention Plans for industrial and construction sites, client assistance with storm water compliance issues, supervision and implementation of erosion and sediment control measures on industrial and construction sites. He is a Qualified Storm Water Practitioner (QSP) and a Certified Erosion, Sediment and Storm Water Inspector (CESSWI #3652).

DETAILED WETLAND EXPERIENCE

Mr. Wiemeyer has performed wetland delineations on over 50 sites in Sonoma County and Northern California. Mr. Wiemeyer has also performed wetland delineation and assessment work on several wetland mitigation bank and conservation bank sites in Sonoma County. The majority of wetland work has been performed for commercial and residential developments for both small property owners and large housing development companies as well as agricultural developments in Sonoma County.

Notable projects include the Occidental Road Mitigation Bank, Santa Rosa, CA; many residential and commercial projects for applicants through the Town of Windsor, CA as a contract biologist; Sonoma County Oakmont Sewer Line Extension Project, Santa Rosa, CA; Sonoma County Todd Road Sewer Trunk Project; Drumright Subdivision in Healdsburg, CA; Bellevue School District, Santa Rosa, CA; Cotati Unified School District, Cotati, CA; Kunde Family Winery, Kenwood, CA; Paseo Vista Subdivision, Santa Rosa, CA.

Wetland projects that Mr. Wiemeyer has performed when working as a biologist for SCS Engineers or as a sub-contractor for SCS Engineers includes a wetland delineation for Sonoma Family Homes in Healdsburg, CA, wetland delineation for the Sanders site in Santa Rosa, CA; wetland mapping for Sierra Pacific Industries in Arcata, CA; a wetland delineation for the Bamford site in Oroville, CA; a wetland and riparian impact evaluation for the Vierra site in Merced County, CA; and a wetland evaluation for a site in Hopland, CA.

Mr. Wiemeyer has also performed wetland and riparian monitoring and reporting on several mitigation and restoration sites in Sonoma County which include biological evaluation of wetland and riparian habitats and ecological processes, quantification of plant species abundance and diversity; evaluation of biological success criteria and preparation of reports for regulatory agencies.

Notable projects include Occidental Road Mitigation Bank, Valdez Riparian Mitigation Project, Windsor, CA; Oakmont Park Village Riparian Mitigation Project, Santa Rosa, CA; Vintana Subdivision Wetland and Riparian Mitigation Project, Windsor, CA;

EMPLOYMENT HISTORY

Wiemeyer Ecological Sciences – Sole Proprietor and Principal Ecologist. September 2007 to Present

PES Environmental, Inc. – Senior Biologist. January 2011 to June 2011

Golden Bear Biostudies, Santa Rosa, CA – Staff Ecologist, Senior Ecologist. June 2004 to September 2007

SCS Engineers, Santa Rosa, CA – Project Biologist. August 2003 to April 2004

EnviroNet Consulting, Santa Rosa, CA – Vice President, Senior Biologist, Project Biologist. March 1999 to August 2003

North State Resources Inc., Redding, CA – Wildlife Field Biologist, Forestry Technician, Biological Monitor. Seasonal 1995 to 1998

Jones and Stokes Associates, Sacramento, CA – Wildlife Field Biologist. Summer 1994

Par Environmental Services, Inc., Sacramento, CA – Wildlife Field Biologist. Summer 1993

CERTIFICATIONS

CASQA Qualified SWPPP Practitioner (QSP) Training and Certification, October 2013.



70 Washington St., Suite 425 • Oakland, CA 94607

Tracy Craig
Principal

- Recognized leader in public participation, with an emphasis on multi-cultural outreach, and in involving citizens in complex and controversial projects
- Proven and successful community outreach experience in Santa Rosa involving stakeholders in technical projects including \$30 million, multi-year remediation project in downtown Santa Rosa
- Successfully managed outreach to gain acceptance for biosolids to energy pilot project for Contra Costa Sanitary for facilities in Richmond and Antioch, California
- Designed outreach program for Republic Services to increase understanding of the importance of recycling, and participation in recycling programs, within low-income, diverse communities
- Manage outreach for urban farm, green recycling program, and water reclamation in North Richmond to teach area residents and school children about farming, recycling, and nature
- Design multi-cultural outreach materials focused on recycling for multicultural Republic Services clients
- Author of DTSC's public participation program to inform/involve communities in the decision-making process for site remediation
- Manage public outreach for redevelopment projects totaling over 900 million dollars in San Francisco, Oakland, San Jose, Napa and the central valley
- Manage public involvement for PG&E's environmental remediation portfolio including the cleanup of contaminated sites throughout the bay area and the cleanup of lead paint on transmission towers
- Manage outreach for the bioremediation of contaminated sediments in a 72-acre pond in northern California
- Developed curriculum, in partnership with Berkeley Lawrence Hall of Science, for school children ages K through 8, on waste management, recycling, water conservation that is used in Berkeley Unified School system

Overview - Tracy Craig is a recognized leader in public participation and specializes in developing ways to involve citizens and stakeholders in technically complex and controversial projects. She has been a practitioner in the areas of third-party facilitation, process design, conflict resolution and stakeholder engagement for more than 30 years, applying these skills to a wide range of projects throughout the western United States. She has designed and implemented over 300 community relations programs for complex and controversial land use and redevelopment projects; designed, managed and facilitated over 1,000 public meetings of various formats; has run ten long-term stakeholder advisory boards; and has negotiated with a variety of organizations and groups to find common ground and move projects forward. Projects include waste management, urban infill and redevelopment, transportation, mining, public lands, hazardous waste remediation, and urban and regional planning. Tracy approaches each community with sensitivity to the specific needs of her client and the community and specializes in the creation of outreach programs that engage and involve diverse populations and give voice to under-represented community members with the recognition that better and sustainable project decisions are made with public representation. She was instrumental in developing the California Environmental Protection Agency's public

participation program and serves as a developer and trainer on courses in public participation provided to the US EPA and private industry.

Representative Projects

Republic Services – Outreach Program

Responsible for the design and execution of public involvement program to increase recycling among low-income communities of color. A grassroots approach of working with community based organizations, local schools, and door-to-door canvassing has increased household recycling in low-income communities by 30 percent in one year.

Contra Costa Sanitary – Biosolids to Energy Pilot Program

Designed a public education and outreach campaign to gain public support of pilot program for a biosolids to energy pilot program in Richmond and Antioch. Work involved development of collateral materials, working with community based and business organizations, and other citizen groups to develop understanding and support of a technically complex program.

Community Outreach for Pacific Gas and Electric Company – Manufactured Gas Plant Program

Since 2004, has overseen the development and implementation of public affairs and risk communications strategies for the investigation and remediation of 56 former manufactured gas plant sites located in urban areas throughout Northern and Central California for a major utility provider. Work included development of programmatic and project specific communications strategies and plans; development of risk communication strategy; development of supporting collateral materials; conducted public meetings/workshops/open houses/site tours/briefings; fulfill all DTSC and Water Board public participation requirements; provided outreach staff in the field during remediation; prepare crisis communications plans and responded to project issues; agency interface and negotiation; executed a local hire program to support projects in remediation.

Community Outreach/Education/Planning for Contra Costa County – North Richmond Specific Plan

Providing all outreach services for the development of a Specific Plan for the unincorporated area of North Richmond. Work includes conducting all community outreach work to make sure that area residents, business and property owners, representatives of the cities of San Pablo and Richmond, and other key stakeholders are informed of the development process and are afforded multiple opportunities to participate. Tasks to date include: identification of key stakeholders in North Richmond, Richmond, San Pablo and the broader regional community; design and execution of a communications plan; coordinating a series of community meetings and planning sessions to inform Specific Plan; meeting facilitation; development of project communication pieces and press releases; community briefings; development of a website.

Education:

- BA, Journalism and Psychology, San Diego State University, 1985

Awards:

- 2016 Enterprising Businesswoman of the Year
- 2016 WBENC Women of the Year
- 2015 and 2016 PG&E Supplier of the Year

Certifications:

- Small, women-owned business – CPUC; Small business – State of California GA; Small local emerging business – Alameda County

Matthew Cotton has over 30 years of experience in solid waste management planning; permitting, environmental, and regulatory compliance; and composting, having worked in the industry since 1986. His company, Integrated Waste Management Consulting, LLC, has provided technical consulting services to public and private clients in California since 1995. Mr. Cotton has completed hundreds of significant solid waste projects from permitting and assisting in the development of new and expanding composting, anaerobic digestion, and chipping & grinding facilities, including providing hands-on odor control mitigations at composting facilities to conducting important statewide studies of the California organics industry.

PROFESSIONAL EXPERIENCE

- 1995 – Present **Principal, Integrated Waste Management Consulting,** Sole proprietor of consulting firm, specializing in solid waste management planning; permitting, environmental, and regulatory compliance; and composting for public and private clients.
- 1990 – 1995 **Associate, Brown, Vence & Associates.** Conducted numerous solid waste projects for public and private clients. Served as firm-wide resource on composting and organics recovery projects.
- 1986 – 1990 **Research Associate, Genereux Research.** Conducted solid waste and environmental research for this St. Paul, Minnesota based socio-economic research firm. Completed first yard trimmings composting pilot project in Minnesota in 1986.

EDUCATION

B. A., Geography and Cultural Anthropology, Macalester College, St. Paul, Minnesota, 1986.

USCC/SWANA Certification, Manager of Composting Programs (Instructor).

Graduate, Washington Organic Recycling Council's Compost Facility Operator Training Course.

AFFILIATIONS

Board of Directors, U.S. Composting Council 1999-present, President of the Board 2006, 2007 & 2008, Immediate Past-President 2009, 2010.

Board of Directors, Californian's Against Waste (2010 – Present)

Founding Member, California Organics Recycling Council

Solid Waste Association of America

California Resource Recovery Association

F: SCS Engineers – Additional Qualifications

Client Evaluations

Steve Hamilton, Leslie Lukacs, Patrick Sullivan, Michael O'Connor, Jonathan Meronek, Bob Viers, Ambrose McCready, Jose de la Lama, and Andy Heffel have all performed services for Republic Services that contributed to receipt of this 2014 evaluation. In fact, some listed staff have performed numerous services and projects for Republic over a duration of decades.

SCS is consistently one of our best consultants and provides a high level of quality and expertise at reasonable prices. They have staffed projects with appropriately qualified and trained personnel and bring a superior level of technical competence to projects. Project management and communication are excellent, and the overall quality of service is superb.

SCS's project teams demonstrate an understanding of the project requirements and agreed upon scope of work and go the extra mile to complete the work on time and within budget. Billings are accurate, [they] consistently look for appropriate cost effective alternatives, and change orders are rare. There have been no instances of liquidated damages, etc. of which I am aware.

As a large national consumer of environmental services, Republic has the option to use many consultants. SCS is consistently one of our go-to firms because they are customer oriented, extremely responsive when issues arise, focused on budgets and reasonable engineering solutions, and effectively execute assignments. They also excel at providing systems that reduce long-term operating costs.

David H. Penoyer, PE
Republic Services, Inc.
Corporate Landfill Gas Operations Manager

2016 survey comments:

1. Re: landfill compliance and other environmental compliance services at the Fink Road Landfill in Crows Landing, CA (key contributors: **Patrick Sullivan, Ambrose McCready**, and other SCS staff):

What pleases you most about our working relationship with you?

Great follow through from your staff.

Jami Aggers
County of Stanislaus
Modesto, CA

2. Re: commercial food waste recycling technical support for RecycleSmart in Walnut Creek, CA (key contributors: **Leslie Lukacs** and other SCS staff):

What pleases you most about our working relationship with you?

Experience and technical proficiency which translated into a successful project result and [SCS's] adherence to the scope of work and budget, again contributing to project success.

Bart Carr, Senior Program Manager
RecycleSmart
1850 Mt Diablo Blvd, Suite 320
Walnut Creek CA 94596

3. Re: EPC services at the Stanton Energy Center in Orlando, FL (key contributors: **Bob Viers** and other SCS staff). SCS Energy has served this client since 2007. Our first EPC project was in 2009, and we began another EPC expansion for this client in 2017:

What pleases you most about our working relationship with you?

SCS has always done the right thing when dealing with OUC. Our working relationship is excellent and we trust SCS to handle their tasks, while still incorporating suggestions and requests by OUC.

Daniel Haddad
Orlando Utilities Commission
Orlando, FL

Letters from the County of Placer and Stanislaus County are provided below.



May 12, 2017

Ambrose A. McCready, PE
SCS Engineers
3117 Fite Circle, Suite 108
Sacramento, CA 95827

RE: SOLID WASTE CONSULTING FOR COUNTY OF PLACER

Ambrose:

I am pleased to provide this reference letter regarding SCS's support on various projects for the County of Placer (County). SCS has been providing various consultant services through competitive proposals for the County since 1997 including the following:

- SCS has provided landfill gas (LFG) monitoring, operations and maintenance (MO&M) services at the County's closed landfills starting in 1997. SCS has provided these services at the Loomis, Meadow Vista, and Eastern Regional Landfill;
- SCS has been performing ongoing groundwater quality monitoring and reporting services at the Loomis, Meadow Vista, Foresthill and Eastern Regional Landfill since 2006;
- SCS has also performed LFG system engineering at several of the sites including an expansion of the LFG system at the Eastern Regional Landfill.
- SCS prepared five-year aerial photograph and topography maps for Loomis, Meadow Vista, Foresthill, and Eastern Regional Landfills in 2012;
- SCS designed the final cover expansion for the ERL in 2014-2015.

SCS continues to provide ongoing groundwater monitoring/reporting services, LFG system O&M services at various active and closed landfill sites in the County and is currently on the County's list of pre-qualified firms for *Water Quality and Landfill Operations, Engineering and landfill Gas System*.

I have work with you and your staff since 2006. SCS provides a high level of expertise and provides services in a timely and cost conscience manner. I appreciate the services you have provided over the years and would be happy to respond to any inquires for other potential clients.

Sincerely,

Walter Schwall, P.E.
Senior Civil Engineer
530 886-4942
wschwall@placer.ca.gov

WS:ws





**DEPARTMENT OF ENVIRONMENTAL RESOURCES
Administration**

Jami Aggers
Director

3800 Cornucopia Way, Suite G, Modesto, CA 95356-9494
Phone: 209.525.6770 Fax: 209.525.6773

May 15, 2017

Ambrose A. McCready, PE
SCS Engineers 3117 Fite Circle, Suite 108
Sacramento, CA 95827

Dear Ambrose:

Solid Waste Consulting for county of Stanislaus

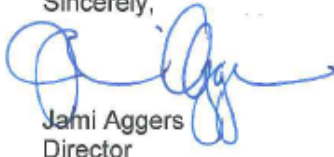
I am pleased to provide this reference letter regarding SCS Engineer's (SCS) support on various projects for the County of Stanislaus. The first project at the Fink Road Landfill began in 1996 with various other projects following through today.

- Prepared design plans and specifications for closure of 18-acre Landfill Cell No. 1. SCS also provided construction management and CQA services during closure.
- Prepared a storm water master plan and grading/drainage plans for the active landfill area (Fink Road).
- Assisted the County with preparation of an Updated JTD for five-year permit renewal in 2015.
- Provided O&M and monitoring of LFG system, including air quality permitting and compliance.
- Updated of site life and 100-year projections as of 2016 and 2017.

SCS is continuing to provide ongoing consulting services, as well as groundwater monitoring/reporting services and operation and maintenance services at the County's main disposal facility at the Fink Road Landfill.

We have worked with you and your staff for many years and have been very satisfied with the work quality we receive, the responsiveness of the staff, and the timeliness with which work is completed.

Sincerely,



Jami Aggers
Director

Organic Materials Management Services

SCS's organic material management services are listed below **Table 5**.

Table 5. SCS Organic Material Management Services	
<i>Program Planning and Development</i>	<ul style="list-style-type: none"> Regulation Review. Program Planning. Zero Waste Planning. Evaluation of Public-Private Partnership Planning. Development of Waste Diversion Programs. Organic Waste Collection. Greenhouse Gas Inventory Studies. Sustainability Plans. Solid Waste Management Plans.
<i>Design and Permitting</i>	<ul style="list-style-type: none"> Composting Systems: open windrow; aerated static piles; in-vessel. Anaerobic Systems: wet and dry digesters; landfill pods; biogas treatment. Biogas-to-Energy: engines, turbines, boilers, CNG. Technical assessment of design. Siting studies. Solid waste permits. Air permits.
<i>Operations, Monitoring, and Sales</i>	<ul style="list-style-type: none"> Compost Operations: Mixing, turning and screening. Temperature and moisture monitoring. Noise, dust and odor monitoring. Tracer odor monitoring and studies. Marketing and sales of compost products. Biogas power plants and processing facilities.
<i>Financial and Economic Analysis</i>	<ul style="list-style-type: none"> Feasibility studies. Rate Analysis. Cost of Service Studies. Cost, Financial, and Economic Analysis. Pay-As-You-Throw (PAYT) and Alternative Rate Programs. Development of LOI/RFQ/RFP/Bid Documents. Assistance with grant funding applications. Customer Billing and Service Reviews.
<i>Other Services</i>	<ul style="list-style-type: none"> Development of Public Education Programs. Facilitation of Public Meetings. Public Opinion Surveys. Business Waste Audits. Waste Characterization Programs. Benchmarking Surveys of Service and Fees. Regulatory Reporting.

SCS Composting Projects (2015–2017)

SCS's ongoing and recent composting projects are described below in Table 6.

Table 6. SCS Composting Projects (2015–2017)		
Client	Project	Date
Aerated Static Pile		
Big Reuse, NY Leah Retherford, 718-535-3365 leah@bigreuse.org	Surveying and site grading; design of working surfaces; stormwater management design; contact water management; and preparation of bid documents for a compost facility using the Gore cover system at a site in Queens, New York. Bid-phase and construction-phase services are also provided. The project resulted in an increase in processing capacity. Ongoing.	2016-2017
County of Lorain, OH Keith Bailey, 440-329-5440 kbailey@loraincounty.us	Provide engineering and technical services, including conceptual design for a covered aerated static pile system for a new composting facility in Lorain County, Ohio. Ongoing.	2017
Sustainable Generation, Alberta, Canada Scott Woods, 917-678-6947 scott.woods@sustainable-generation.com	Provision of design services (incl. layout drawings) to Sustainable Generation and Gore to support installation of 16 Gore cover systems. The covered aerated static pile (ASP) system will compost source-separated organics and mixed municipal solid waste. Completed.	2016
Sustainable Generation, CA Scott Woods	Provision of design services (including layout drawings) to Sustainable Generation and Gore to support installation of 12 Gore cover systems. The covered aerated static pile (ASP) system will process source-separated organics. Completed.	2017
Sustainable Generation, Hawaii Scott Woods	Provision of design services (incl. layout drawings) to Sustainable Generation and Gore to support installation of 6 Gore cover systems. The covered aerated static pile system will process source-separated organics. Completed.	2016
Sustainable Generation, IL Scott Woods	Provision of design services (incl. layout drawings) to Sustainable Generation and Gore to support installation of 27 Gore cover systems. The covered aerated static pile system will process biosolids. Completed.	2017
Sustainable Generation, MD Scott Woods	Provision of design services (incl. layout drawings) to Sustainable Generation and Gore to support installation of 8 Gore cover systems. Permitting and construction-phase services are also provided. The covered aerated static pile system will process source-separated organics. Ongoing.	2016-2017
Sustainable Generation, NY Scott Woods	Provision of design services to Sustainable Generation and Gore to support installation of 16 Gore cover systems at the Fresh Kills Composting Facility. The covered aerated static pile system will process up to 100 tons per day of food scraps and 100 tons per day	2016

Table 6. SCS Composting Projects (2015–2017)

Client	Project	Date
	of mixed yard waste. Completed.	
California		
City of Modesto, CA Karin Rodriguez, 209-577-5492 krodriguez@modestogov.com	Compost facility regulatory compliance monitoring. Ongoing.	2013-2017
County of Santa Clara, CA Lisa Rose, 408-282-3166 lisa.rose@cep.sccgov.org	Composting Processing Capacity Organics Diversion Study. Ongoing.	2017
County Sanitation District of Los Angeles, CA Vikram Reddy, 562-908-4288 vreddy@lacsdc.org	Monitoring, sampling, data entry – Tulare Lake Composting Facility, Kettleman City, CA. Ongoing.	2016-2017
GreenWaste, CA Michael Gross, 408-263-2384 michael@zankerrecycling.com	Community outreach support. Ongoing.	2017
Synagro Management LP, CA Sara Hammes, 443-489-9000 shammes@synagro.com	Organics market assessment with a view to developing additional capacity for composting. Completed.	2016
West Marin Compost, CA Kevin Lunny, 415-662-9849 kevin@westmarincompost.org	Prepared a stormwater pollution prevention plan (SWPPP) and provided geotechnical support and waste discharge requirements (WDR) permitting assistance. Ongoing.	2016-2017
Other States		
Missouri Organic Recycling, MO Kevin Anderson, 816-483-0908 kevin@missouriorganic.com	Prepare a spill prevention, control, and countermeasure plan, and provide stormwater compliance support at the Ewert Brothers Compost Facility, Liberty, MO. Ongoing.	2016-2017
Pierce County Recycling, WA John Rodgers, 253-847-7555 johnro@wasteconnections.com	Provide engineering and permitting support, spill prevention control and countermeasure (SPCC), odor modeling, and environmental compliance and reporting services for the Silver Springs Organic Commercial Composting facility in Rainier, WA. Ongoing.	2010-2017
Sam White & Sons, Inc., MA Dan White, 508-494-3355 white.dt@gmail.com	Provision of operations services for the compost project located at the Sam White and Sons, Inc. Middleboro Facility from October 2015 to September 2017. Tasks included design, permitting and operations services related to food and leaf compost. Operations services included provision and use of a truck-mounted mixer to mix food and leaves, and a Komptech X-60 compost turner to turn the windrows. Sam White sold the finished product through its network of purchasers. Ongoing.	2013-2017

Table 6. SCS Composting Projects (2015–2017)

Client	Project	Date
St. Louis Composting, Inc., MO Patrick Geraty, 636-861-3344 pgeraty@stlcompost.com	Complete as-built survey of new compost pad and check existing stormwater calculations to determine maximum size of pad that the constructed pond can manage. Completed.	2017
Town of Smithtown, NY Allyson Murray, 631-360-7540 amurray@fosgov.com	Research and evaluation of the impacts of organic waste processing facilities (OWPFs), and identification of the Best Management Practices (BMPs) for operating and regulating indoor OWPFs. Among other resources, SCS used the database of the U.S. Composting Council (USCC) to identify composting facilities throughout the country. The Town received funding from the New York State Energy Research and Development SCWMA (NYSERDA) to study the impacts of indoor OWPFs and to draft ordinance amendment(s) that would permit and regulate such facilities in the Town. Ongoing.	2015-2017
Barry Recycling, FL John Barry, 239-340-1529 barryrecycling@aol.com	Permitting an existing composting facility for the use of biosolids. The project includes an initial meeting with FDEP and preparing a site plan and permit application. Completed.	2016
North Lincoln Sanitary Service, OR Lon French, 541-994-5555 lfrench@wcn.net	Stormwater pollution control plan and staff training for the Schooner Creek Transfer Station and Compost Facility in Lincoln City, OR. Completed.	2016
Organix Recycling, LLC, TX John Cowhey, 708-326-3900 johnc@organixrecycling.com	Prepare site plans for an expanded compost facility in Hutchins, TX. Completed.	2016
Solutient GeoSciences, Inc., TX Leslie Jeske, 903-595-4421 ljeske@suddenlinkmail.com	Site Operating Plan update for Vital Earth Resources Compost Facility, in Upshur Co, TX (Type V MSW Permit). Completed.	2016
WCA Waste Corp. of America, TX Marcos Elizondo, 979-793-4430 melizondo@wcamerica.com	Prepare permit to add a compost facility at 3 landfills in TX. Completed.	2016
American Recycled Materials, MA Michael Brumber, 508-893-9700 mlbrumber@hotmail.com	Delivery of engineering and regulatory services related to yard waste composting facility. Tasks included meetings with Town and MassDEP staff about regulatory requirements. Completed.	2015
City of Brownsville, TX Santana Torres, 956-548-6000 storres@cob.us	Visit the City's compost facility weekly, inspect the overall layout and recommend any construction or maintenance required as part of the permit. Inspect the layout of feed materials, process materials, and final compost materials to determine appropriate storage. Review operating processes, the grinding process, feed mixture, windrow turning, screening, storage, and final processing of the finished material. Assist with temperature and tracking of the windrows to assure that the compost material has been held over 140°F for at least 15 days and turned	2015

Table 6. SCS Composting Projects (2015–2017)		
Client	Project	Date
	every 3 days. Completed.	
City of Lee's Summit, MO David Lohe, 816-969-1814 david.lohe@cityofls.com	Engineering design, air compliance, monitoring, stormwater, stormwater pond, and many other landfill and compost facility support services. Completed.	2013-2015
Commonwealth Recycled Aggregates, Inc., VA Chip Dunstan, 703-753-7800 cdunstan@bandssite.com	Prepare Permit-by-Rule (PBR) documentation for composting operation. Completed.	2015
Waste Management, Inc., FL Craig Ash, 954-956-2222 cash1@wm.com	Prepare application for a permit modification to allow for yard trash composting at the WM Recycling Homestead C&D facility located in Homestead, Florida. Completed.	2015
Missouri Organic Recycling, MO Kevin Anderson, 816-483-0908 kevin@missouriorganic.com	Prepare a spill prevention, control, and countermeasure plan, and provide stormwater compliance support at the Ewert Brothers Compost Facility, Liberty, MO. Ongoing.	2016-2017

SCS Overview

Established on the first Earth Day in April 1970, **SCS is a global leader in the engineering, construction, and operation, monitoring, and maintenance (OM&M) of environmental control systems and energy recovery systems, with extensive experience supporting landfill, wastewater treatment, biogas, anaerobic digestion, and composting operations.**

McGraw Hill's *Engineering News Record* (the engineering industry's preeminent rankings publication) has ranked SCS the No. 1 or No. 2 design firm in solid waste the last 12 years in succession (June 2017) and the No. 2 solid waste construction firm 3 of the pasts 4 years (Aug 2016).



SCS employs 765 professional and support staff located in 66 offices, serving clients in all 50 states and internationally. Employees hold approximately 75 different licenses and certifications. SCS is headquartered in Long Beach, California and has been employee-owned since 1986. SCS is a licensed general contractor (A Haz) in California and many other states.

In California, over 270 employees located in 17 offices serve federal, state, and local government agencies, commercial clients, and the U.S. military throughout the state. Many of our senior engineers, solid waste management professionals, and division leaders have been with us for most, if not all, of their working careers. This stability evidences a commitment to our clients and each other. We routinely complete projects in a timely and professional manner, meet all regulatory reporting deadlines, stay within project budgets, and enjoy positive working relationships with the many regulatory agencies responsible for environmental management in California.

G: Sonoma Compost – Notice of Violations

Sonoma Compost - Notices of Violation

Notices of Violations for Sonoma Compost for the years 2013 to 2017 are listed below.

6-16-14 17869(b) - Special Occurrences

Special Occurrences. The Special Occurrence Log sheet for June 2014 did not have any entries written in it on the date of the inspection. Maintain the log sheet in a timely manner throughout the month.

3-6-14 Vectors/Odor/Litter/Hazard/Nuisance/Noise/ Dust [Pre-2016]

In response to a voice mail odor complaint of strong landfill or compost odors, received at 2:00 pm on 3/6/14, a focused inspection was performed. Sonoma County Waste Management and Sonoma Compost staff were notified of the odor complaint on 3/6/14 around 4:30 pm. At 4:18 pm, driving on Meacham Rd., approaching Balma Ln., definite compost odors were present. A strong dairy odor was also observed near Wamboldt Ln. and Meacham Rd. The temperature was around 60 F, mostly cloudy, with low rain clouds. The wind was blowing the windsocks, located at the Central Disposal Site, north east directly towards Everett Ln. Compost odors were present on Balma Ln towards Gladdie Ln. intersection. The compost odor was definite in intensity and consistent in these areas. The Central Disposal Site was investigated, and no landfill or garbage odors were detected near the transfer station or the working face of the landfill. The offsite odor in the Happy Acres neighborhood was confirmed as the same odor at the compost site. During the investigation, compost windrows were being actively constructed and the odor was very strong near the new compost windrow where a large percentage of feathers were visible on the surface (photo taken). The mister system was observed to be operating at a high rate that was dripping enzyme solution from the misting nozzles. No odors were observed from the sedimentation pond. The compost odor was still present at Meacham and Balma at 5 pm. The Sonoma Compost Company, Odor Impact Minimization Plan (5/29/130, Section 5 states: Operating Procedures for Minimizing Odors, "Hauling of materials that causes odors for off-site receptors is halted when excessive odors are detected or anticipated and the wind sock points in the direction of the neighborhood."

12-16-13 PRC 44014(b) - Operator Complies with Terms & Conditions

A large volume of green waste and ground yard waste material was observed on site. The wipe board tracking of incoming feed stock piles indicated that the wood waste materials had exceeded 72 hr. permit processing timeframe. One ground wood pile was marked 12/11/13, demonstrating that it had been post grinding for 5 days without processing into a windrow for composting. The main incoming wood pile had no incoming delivery date on the wipe board and has been onsite without processing for an unknown period of time. Incoming and ground feedstock materials must be processed within 72 hr. timeframes listed in the permit. Provide indicators of delivery and processing dates for all feedstock materials. Central Compost is working with fire services to draft a new permit revision to revise the processing timeframes specified in the permit. A new fire consultant will soon be under contract to begin working with the site to develop a fire safety plan.

11-15-13 PRC 44014(b) - Operator Complies with Terms & Conditions

A large volume of green waste and ground yard waste material was observed on site. The wipe board tracking of incoming feed stock piles indicated that the wood waste materials had exceeded 72 hr. permit processing timeframe. One ground wood pile was marked 11/14/13, demonstrating that it had been post grinding for 4 days without processing into a windrow for composting. Central Compost is working with fire services to draft a new permit revision to revise the processing timeframes specified in the permit.

10-9-13 PRC 44014(b) - Operator Complies with Terms & Conditions

A large volume of green waste and ground yard waste material was observed on site that exceeded the site's 72 hour permit processing timeframe. The wipe board tracking of incoming feed stock piles indicated that ground yard waste materials had exceeded 72 hr. permit processing timeframe. One ground yard waste pile was marked 10/3/13, demonstrating that it had been post grinding for 5 days on 10/8/13 without processing into a windrow for composting. Four additional feedstock piles were exceeding the 72 hr. permit processing time frame. Central Compost is working on a new draft permit revision for informal review and submittal to address the stockpile sizes and processing timeframe.

9-26-13 17867(a)(8) - Fire Prevention, Protection and Control [Pre-2016]

Inadequate Fire Prevention, Protection and Control Measures Title 14 Article 6 Section 178677, General Operating Standards (8), The operator shall provide fire prevention, protection and control measures, including but not limited to, temperature monitoring or windrows and piles, adequate water supply for fire suppression, and the isolation of potential ignition sources from combustible materials. A violation is issued for inadequate fire prevention, protection and control measures is attributed to the following: · The compost overs pile had been on site for an unknown period of time and the last known complete pile turning date is unknown. · The water trucks were empty and not immediately available to fight a fire. · The smoldering overs pile on 9/25/13 was only partially turned in response to the smoldering. · The fire in the overs pile was adjacent to a methane well. Create and implement and maintain an effective fire prevention, protection and control measure plan for the site that mitigates potential fire hazards and includes setbacks from methane wells.

9-5-13 PRC 44014(b) - Operator Complies with Terms & Conditions

A large volume of green waste was observed on site that exceeded the site's 72 hour permit processing timeframe.. Indicators need to be provided to demonstrate that feedstock, agricultural materials, amendments, etc., are in compliance with the processing time limitations specified in the permit. No indicators were present for the wood waste, ground material or agricultural materials during this inspection to demonstrate compliance for processing time limits specified in the permit. The wood waste piles were observed to have been reduced significantly. The new wipe board tracking of green waste piles indicated that green waste materials had exceeded 72 hr. permit processing timeframe. One pile was marked 8/27/13, demonstrating that it had been on site for 9 days without processing. Central Compost has submitted a draft a permit revision for informal review to address the feedstock pile dimensions and processing timeframes.

8-1-13 PRC 44014(b) - Operator Complies with Terms & Conditions

In June 2013, the site exceeded the total allowable number of vehicles on 5 days. Vehicle counts varied from 207 to 235 vehicles per day. The information is based on the traffic log sheet in the June 2013 monthly report. The permitted traffic volume is limited to 206 vehicles per day, Monday-Saturday. Central Compost has submitted a draft a permit revision that addresses this issue.

A large volume of green waste and wood feed stock was observed on site that exceeded the site's 72 hour permit processing timeframe. During the inspection, a spread out green waste pile to picking out contaminants was observed to have many blackened areas and visible steam rising in several areas. The observed level of feedstock decomposition may be due to length of time in the pile or the condition of the feedstock on arrival. Indicators need to be provided to demonstrate that feedstock, agricultural materials, amendments, etc., are in compliance with the processing time limitations specified in the permit. Based on multiple conversations with the operator, it is not possible to provide inspection indicators to demonstrate compliance. No indicators were present during this inspection to demonstrate compliance for processing time limits specified in the permit. Green waste feedstock piles had from 9 ft-12 ft. pathways between piles for emergency vehicle access. Maintain a minimum of 15 ft. pathways between feed stock piles. Central Compost has submitted a draft a permit revision that addresses the feedstock pile dimensions and processing timeframes.

7-10-13 PRC 44014(b) - Operator Complies with Terms & Conditions

A large volume of green waste and wood feed stock was observed on site that exceeded the site's 72 hour permit processing timeframe. Indicators need to be provided to demonstrate that feedstock, agricultural materials, amendments, etc., are in compliance with the processing time limitations specified in the permit. Based on multiple conversations with the operator, it is not possible to provide inspection indicators to demonstrate compliance. No indicators were present during this inspection to demonstrate compliance for processing time limits specified in the permit. Based on conversations with the Central Compost will be proposing a permit revision to address the issue in the future.

7-2-13 17867(a)(2) - Vectors/Odor/Litter/Hazard/Nuisance/Noise/ Dust [Pre-2016]

In response to a telephone odor complaint of strong compost odors at 3:30 pm on 7/2/13, a focused inspection was performed on 7/2/13 by Jennifer Sylvester, Environmental Health Specialist III. Sonoma County Waste Management was notified of the odor complaint at 3:35 pm. At 3:50 pm, driving on Meacham Rd. approaching Everett Ln. a very strong compost odor was present followed by a lighter dairy odor. The temperature was around 80 f mostly clear with high clouds. The wind was blowing strong north east directly towards Everett Ln. Compost odors were present on Wambold Ln. lighter in intensity and consistent. Compost odors were present on Gladdie Lane as I approached Everett. The compost odor was much stronger and persistent on Everett as I drove west towards Meacham Rd. The compost odor faded off as I approached Balma lane and reappeared as noticeable and consistent as I approached 16 Balma Ln. and headed East towards Gladdie and remained consistent and growing stronger as I got closer to Everett Ln on Gladdie. No compost odors were present on

Hammel Rd. The Central Disposal Site was then investigated. No landfill garbage odors were detected near the transfer station or face of the landfill. The offsite odor in the Happy Acres neighborhood was confirmed as the same odor coming off the compost site near the mister system and compost odor was very strong on the Central Compost site. The mister system was observed to be operating. There was water present in the first compost pond from the rain event last week. No odors were observed from the pond.

6-26-13 17867(a)(2) - Vectors/Odor/Litter/Hazard/Nuisance/Noise/ Dust [Pre-2016]

In response to an odor complaint sent to the Air Board on June 27, 2013 a focused inspection was performed on June 28, 2013. The complaint was forwarded to the LEA at 4:30 pm on June 27, 2013. Strong consistent compost odors were experienced along Meacham between Stoney Point Road and Balma Lane. Milder but consistent compost odors were detected near the lower ponds at Hammel Road and Meacham. Very strong odors were present at the compost site that is typical of a warm day in the afternoon at the compost site. Compost odors were experienced in the area of the pond located just past the mister system.

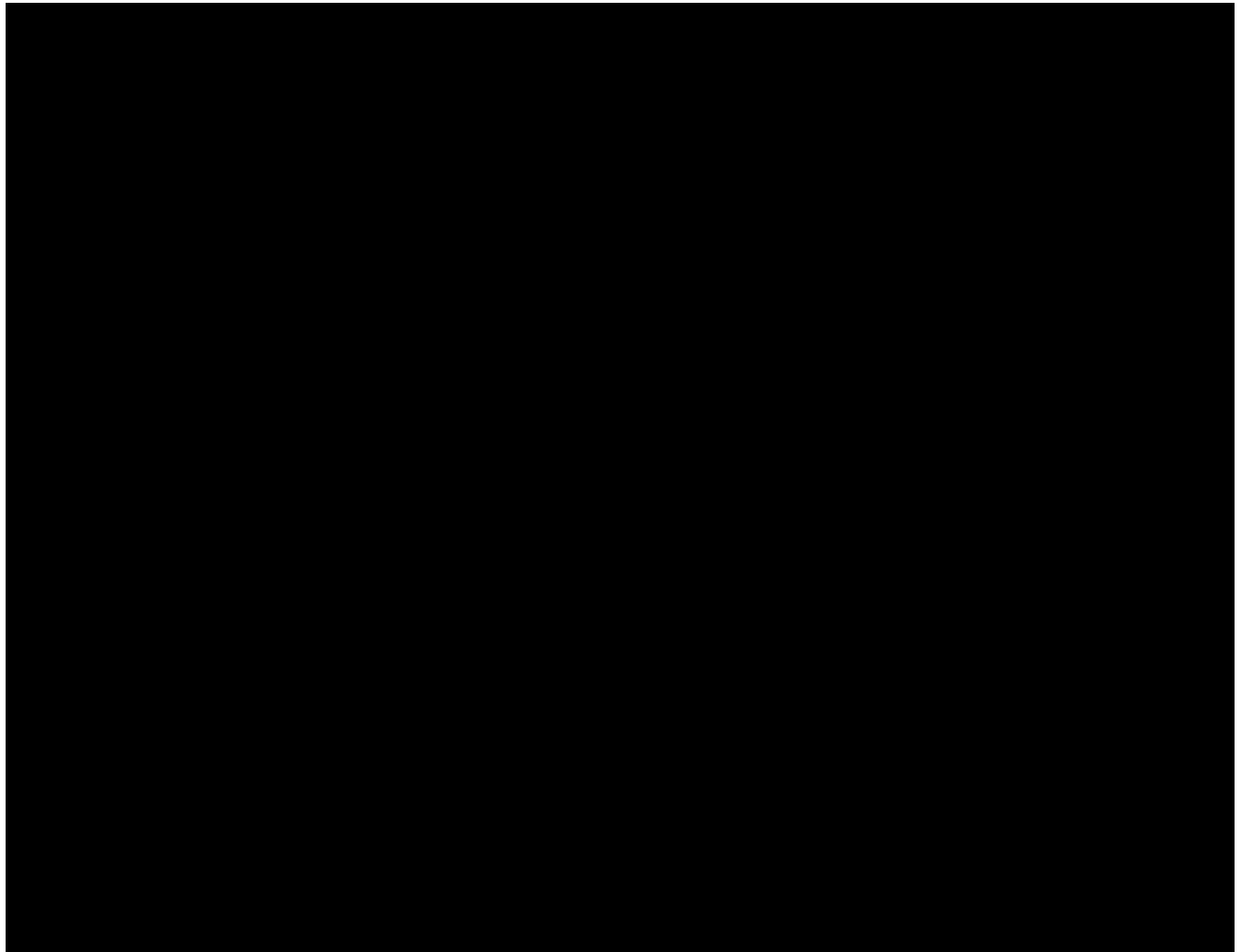
04/30/2013 17867(a)(2) - Vectors/Odor/Litter/Hazard/Nuisance/Noise/ Dust [Pre-2016]

On 4/30/13 11:30 am, an inspection was performed in response to an odor complaint for the Central Disposal Site. Upon approaching the Camozzi Dairy before Balma Lane, on Meacham Road I detected the strong odor of the Sonoma Compost facility. The Happy Acres subdivision was investigated to determine if there were any offsite landfill or compost odors in the area. Compost odors were detected was in the area of Balma Ln., driving towards Meacham Road at 11:40 am. Compost odor persisted along Balma to Meacham Road. The compost odors were confirmed by investigating the Central Compost site where the odor was the same between the windrows and the mister system at 11:55 am. The feather pile observed during the inspection performed on 4/29/13 was approximately half in size. Will Bakx stated that the feathers were placed into one windrow. The windrow was observed during the inspection and it appeared to be the a large contributor to the malodor at the site. Will Bakx of Sonoma Compost was notified onsite of the inspection findings at 12:10 pm. He was aware of the complaint and had done odor monitoring and had not detected any compost odors offsite. He stated that they had applied a cap of Suppress to the new windrow with the chicken feathers.

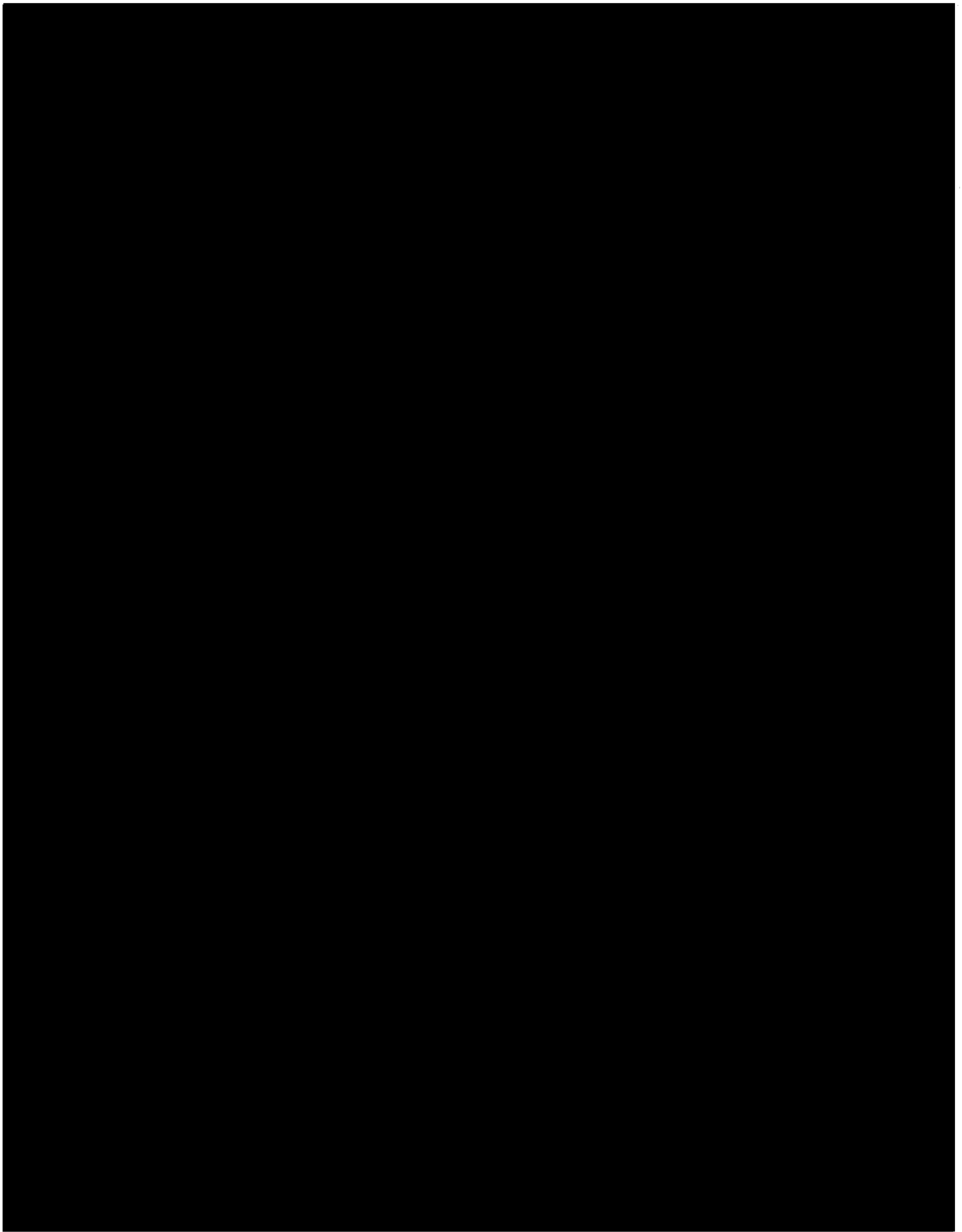
4-29-13 17867(a)(2) - Vectors/Odor/Litter/Hazard/Nuisance/Noise/ Dust [Pre-2016]

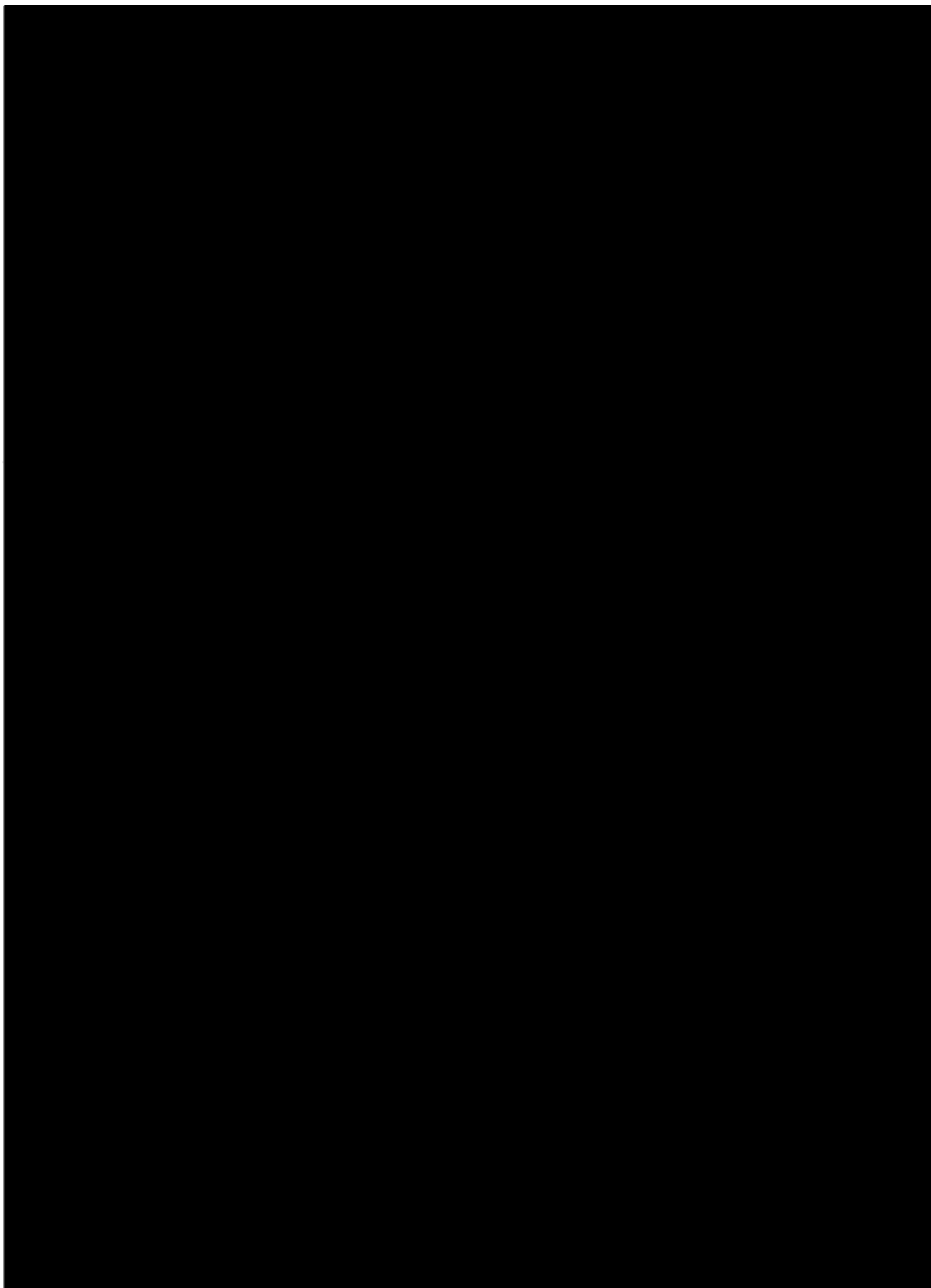
On 4/29/13 11:25am, upon approaching the Camozzi Dairy before Balma Lane, along Meacham Road a consistent, strong odor of compost was detected as well as a minor odor of cut hay. The compost odor was confirmed by investigating and inspecting the Central Compost site where the odor was identical to the odors identified along Meacham Rd. Will Bakx of Sonoma Compost (the contractor) was notified of the investigation findings at 1:45pm. Will stated that the odor monitoring was performed during the day and compost odors were not detected offsite but identified odors coming from the dairy and fresh cut hay. Upon leaving the site, the Happy Acres subdivision was inspected again to determine if there were any offsite landfill or compost odors in the area. Odors from the Central Site were not detected in the Happy Acres subdivision at 3:30pm.

H: Financing Letters of Intent & Support, Resolutions, Business Tax Returns & Audited Financial Statements

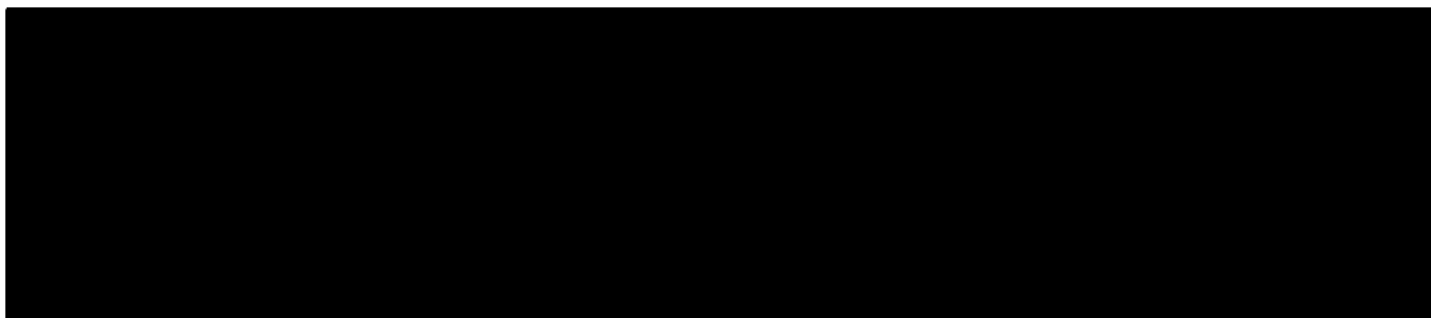


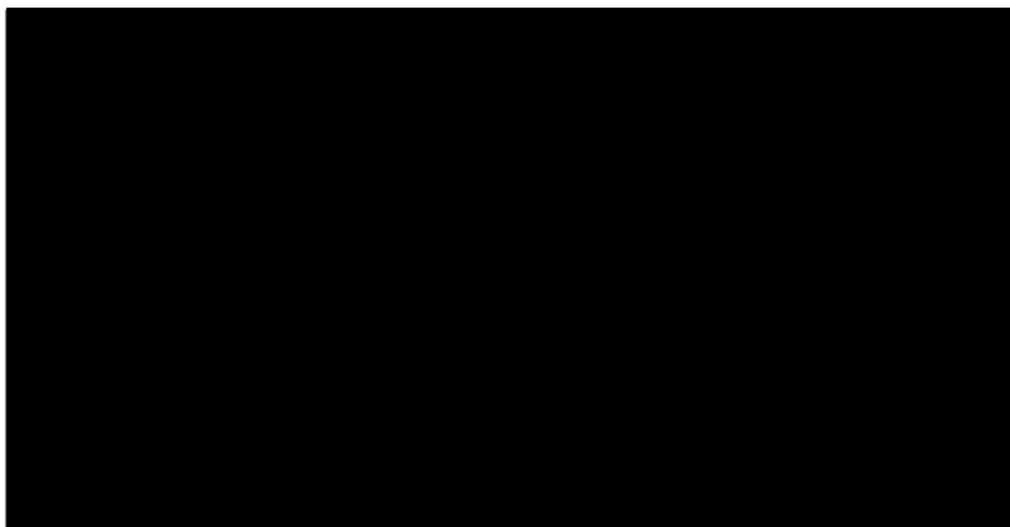
NOTE: ALL DOCUMENTS INCLUDED IN APPENDIX H ARE STRICTLY CONFIDENTIAL and are provided for the express purpose of evaluating our team's financial qualifications for this project. No part of any document should be shared with anyone for any other reason without the express written consent of Renewable Sonoma and SCS Engineers.

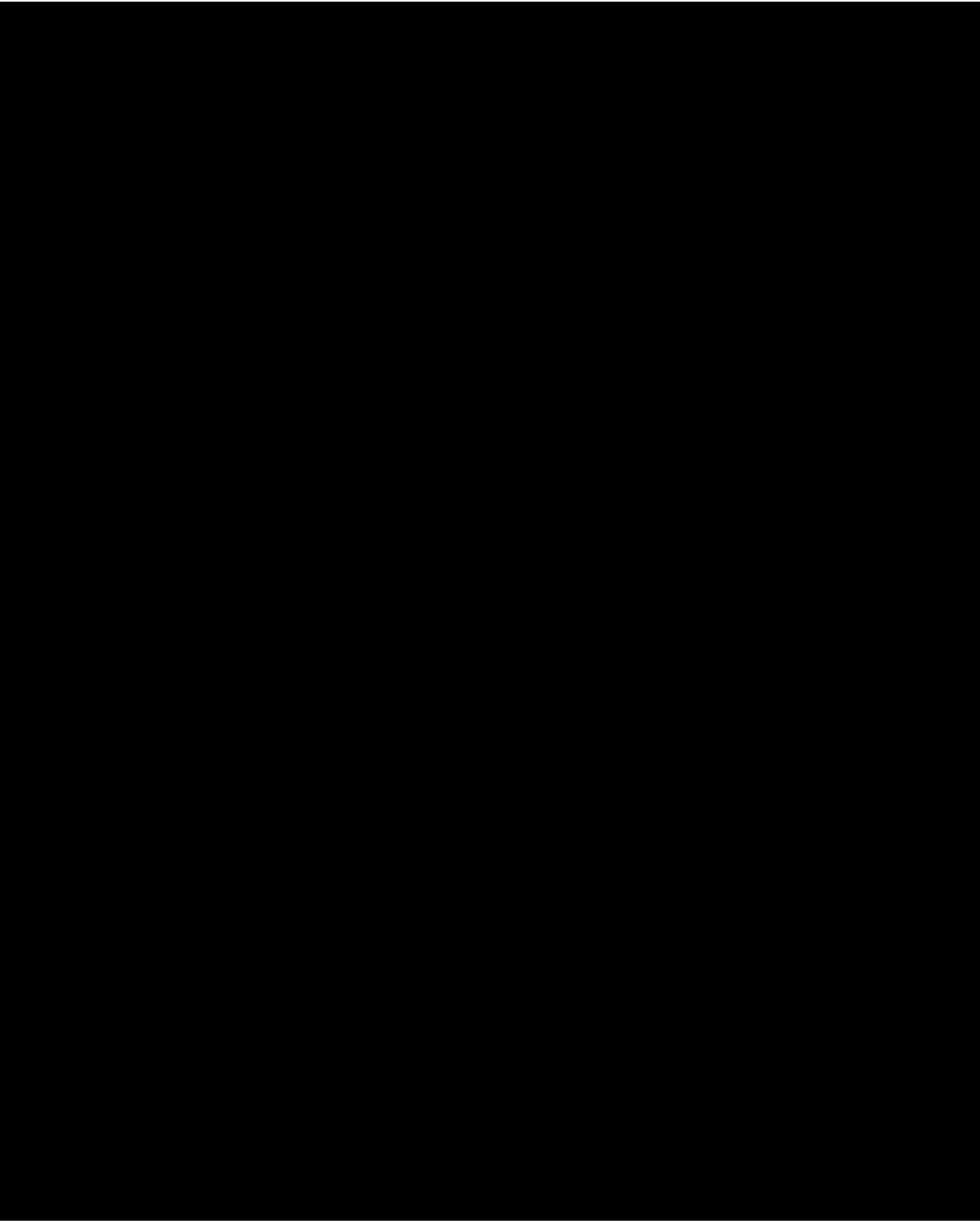












Carbotech

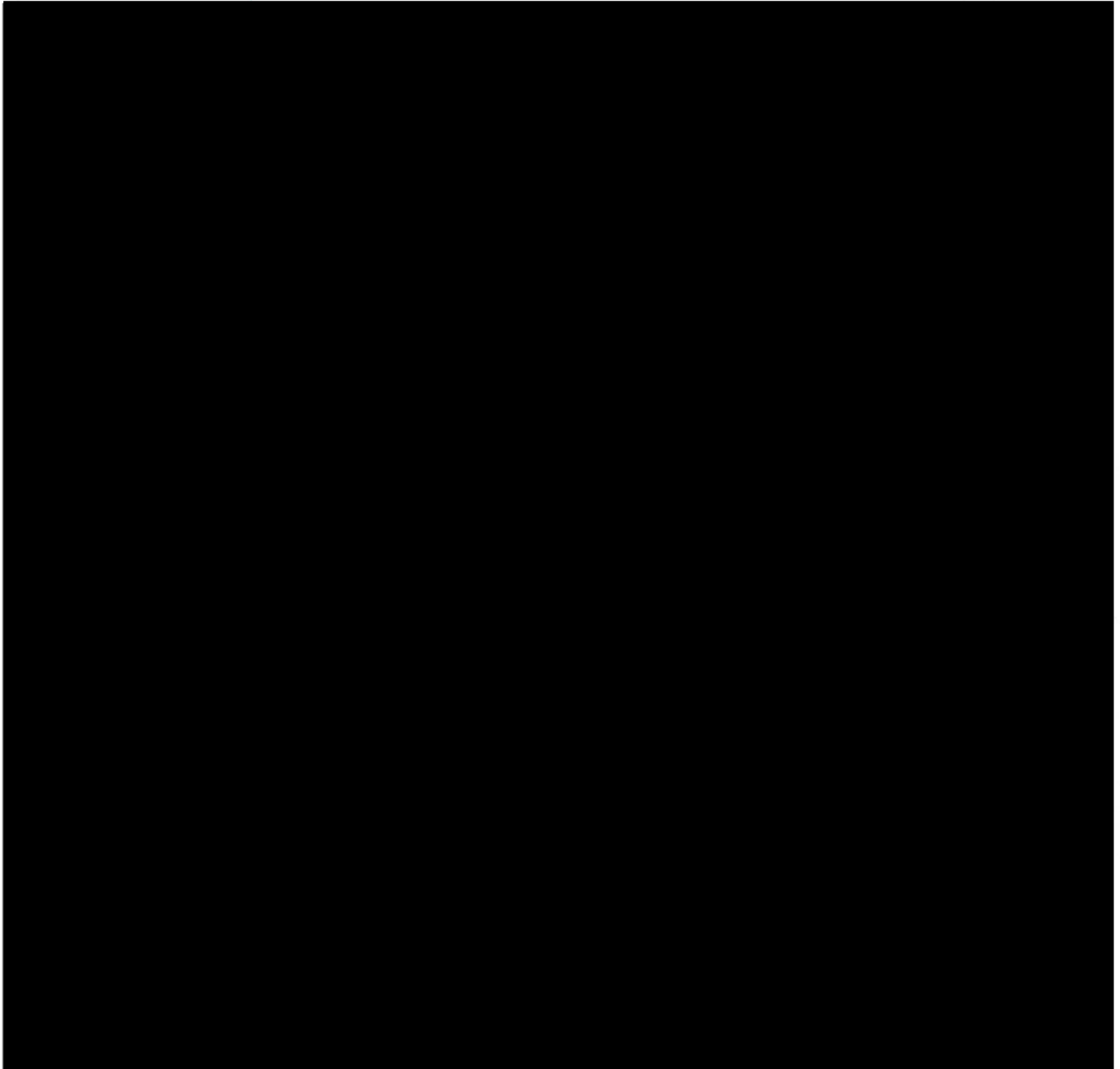
VIEHMANN Group

Schmack

VIEHMANN Group

BIOFERM[™]
ENERGY SYSTEMS

September 27, 2017





招商銀行
CHINA MERCHANTS BANK





January 3, 2018



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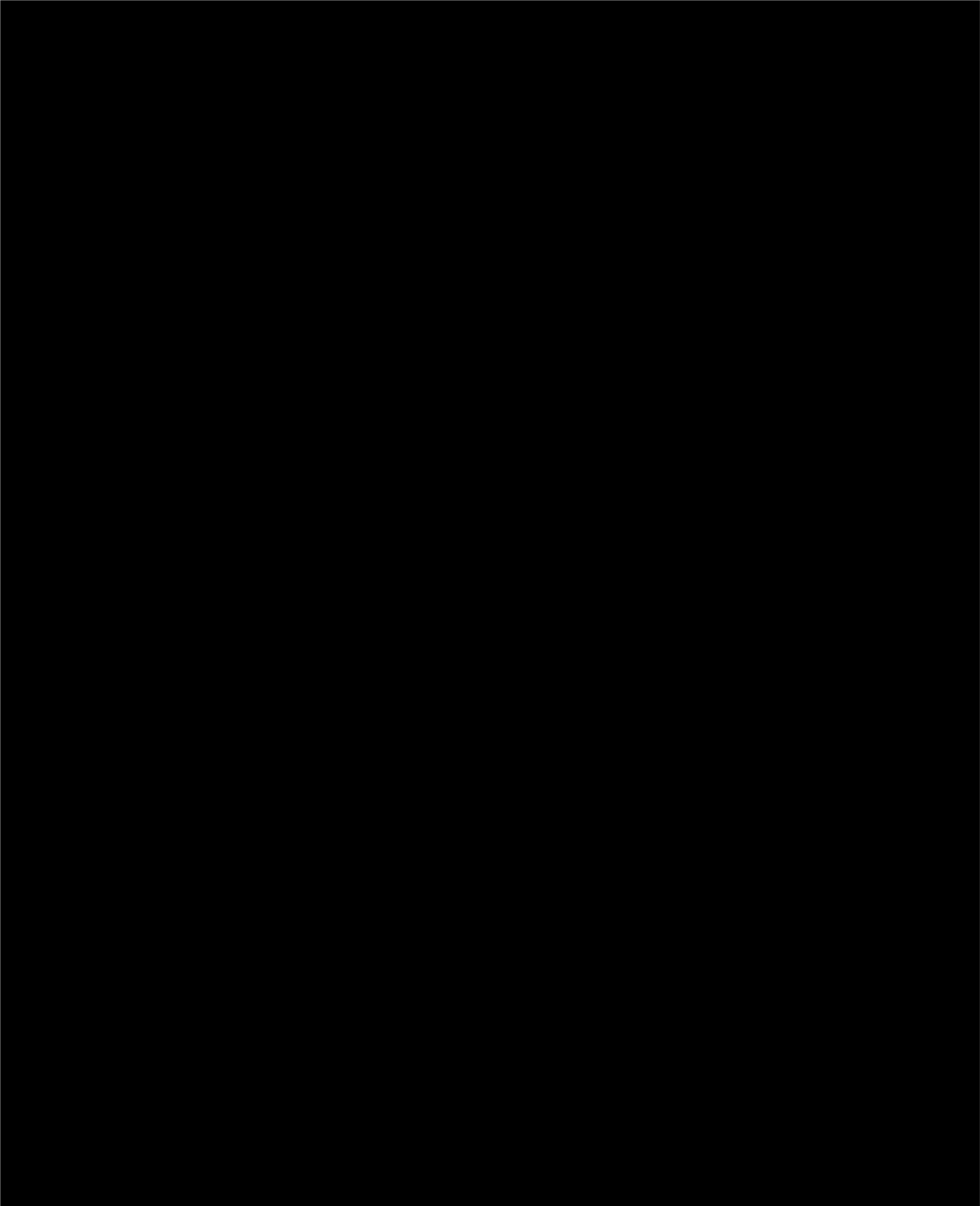
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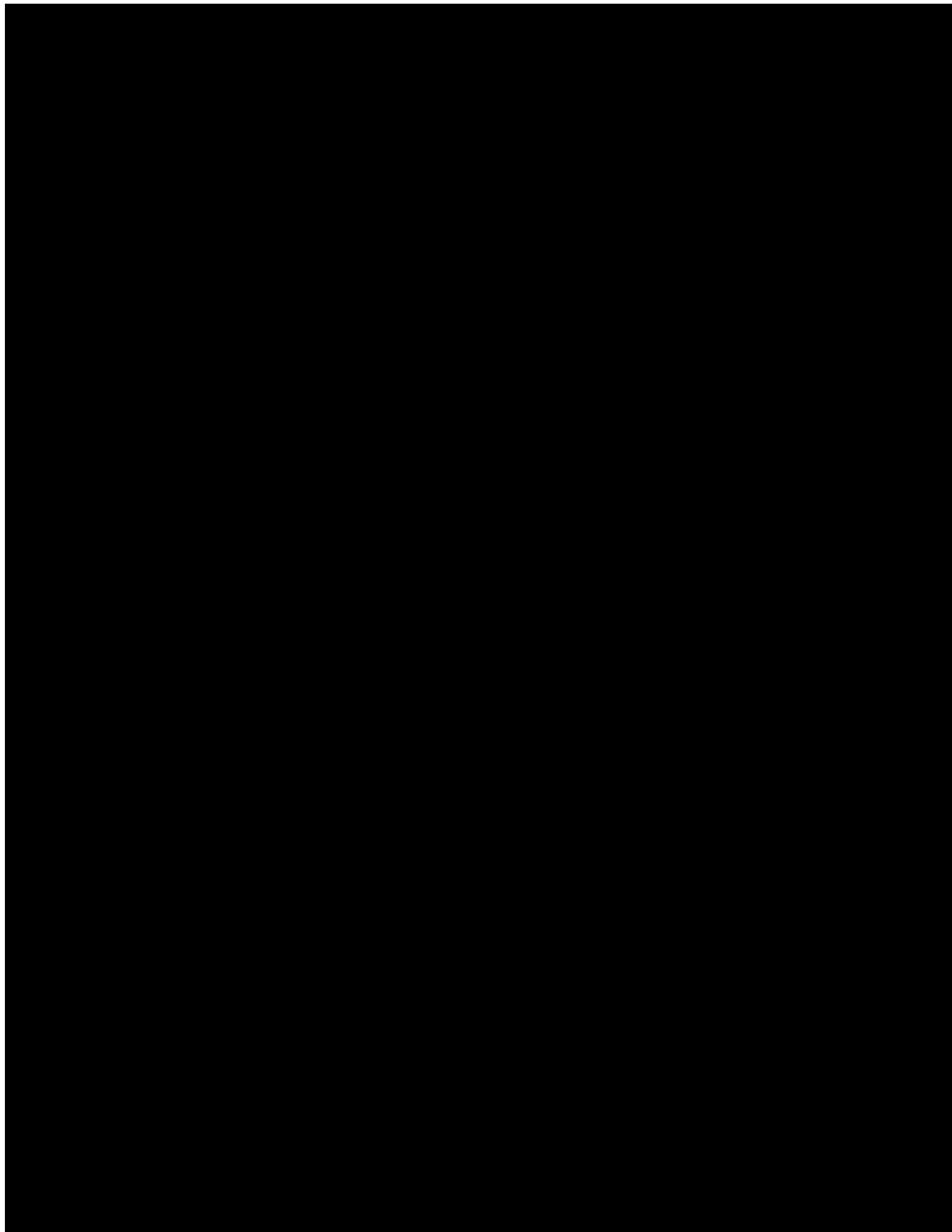
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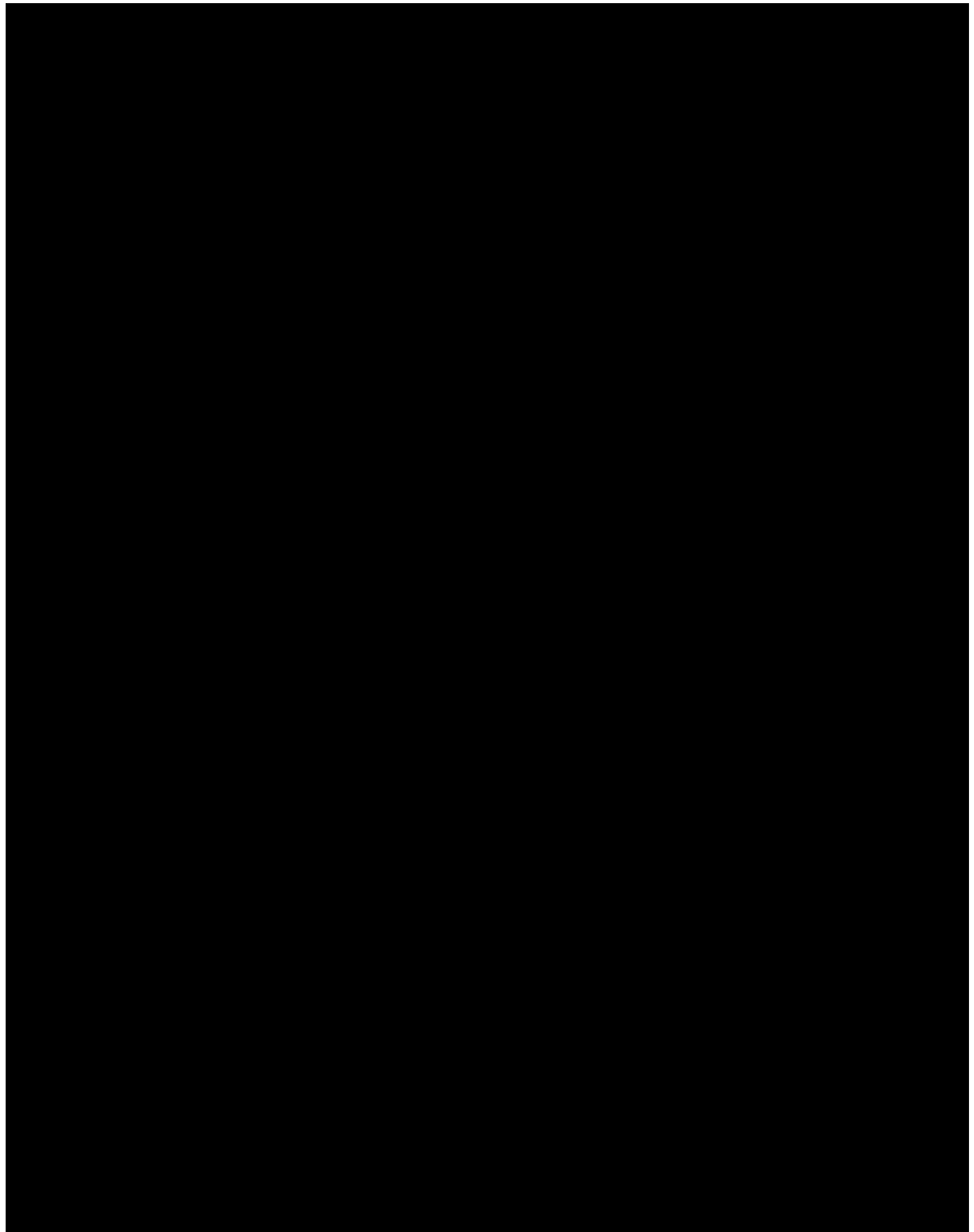
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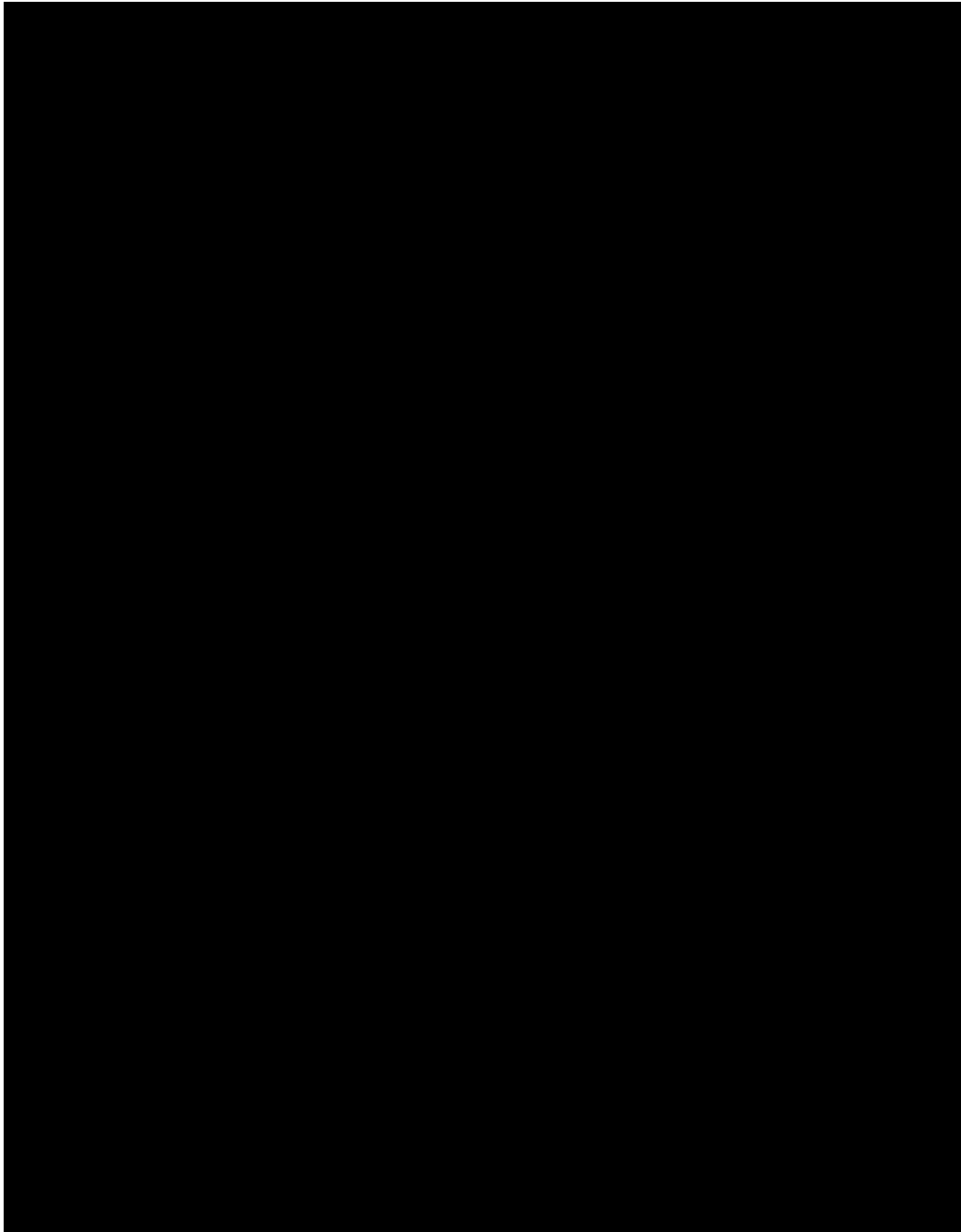
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the 1990s, the number of people in the UK who are aged 65 and over has increased from 10.5 million to 13.5 million, and the number of people aged 75 and over has increased from 4.5 million to 6.5 million (Office for National Statistics 2000).

There is a growing awareness of the need to address the needs of older people in the community. The Department of Health (1999) has published a strategy for older people, which sets out a vision for the future of older people's health and social care. The strategy is based on the following principles: older people should be able to live independently in their own homes; older people should be able to access the services they need; and older people should be able to participate in the decisions that affect their lives.

The strategy also sets out a number of objectives for the future of older people's health and social care. These include: to improve the quality of life of older people; to reduce the inequalities in health and social care; to ensure that older people are able to access the services they need; and to ensure that older people are able to participate in the decisions that affect their lives.

The strategy is a key document for the future of older people's health and social care. It sets out a vision for the future of older people's health and social care, and it sets out a number of objectives for the future of older people's health and social care. The strategy is a key document for the future of older people's health and social care.

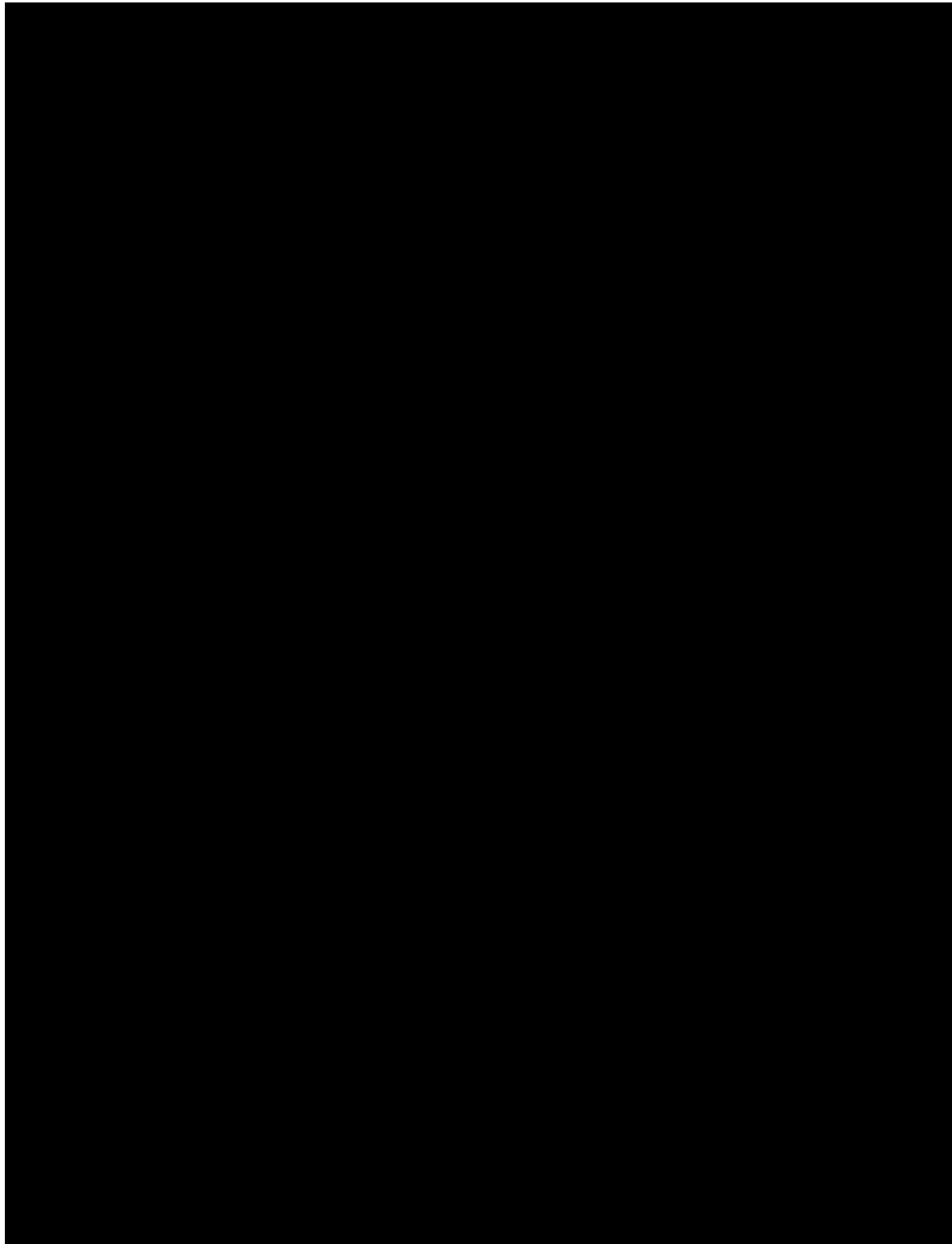
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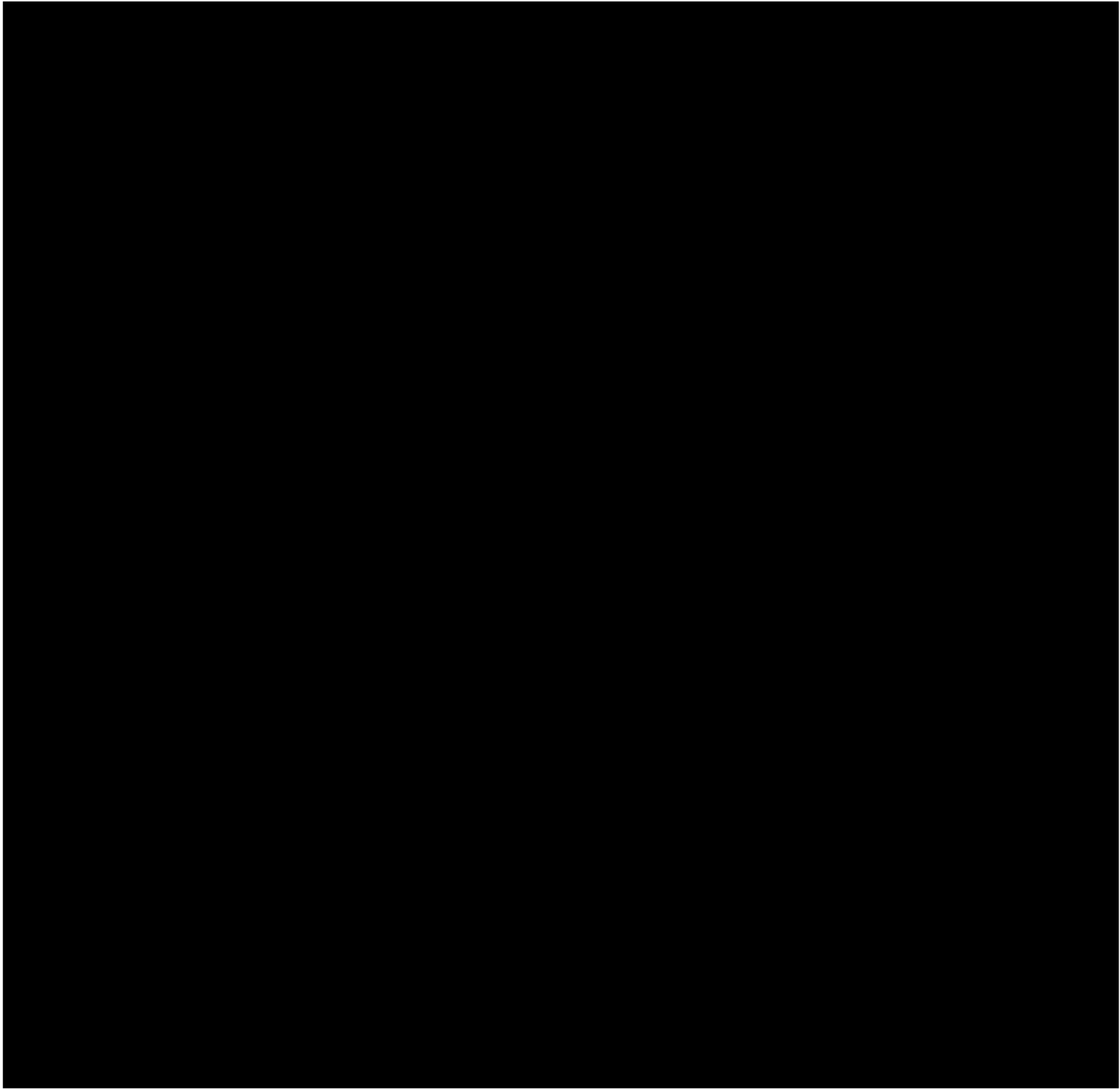
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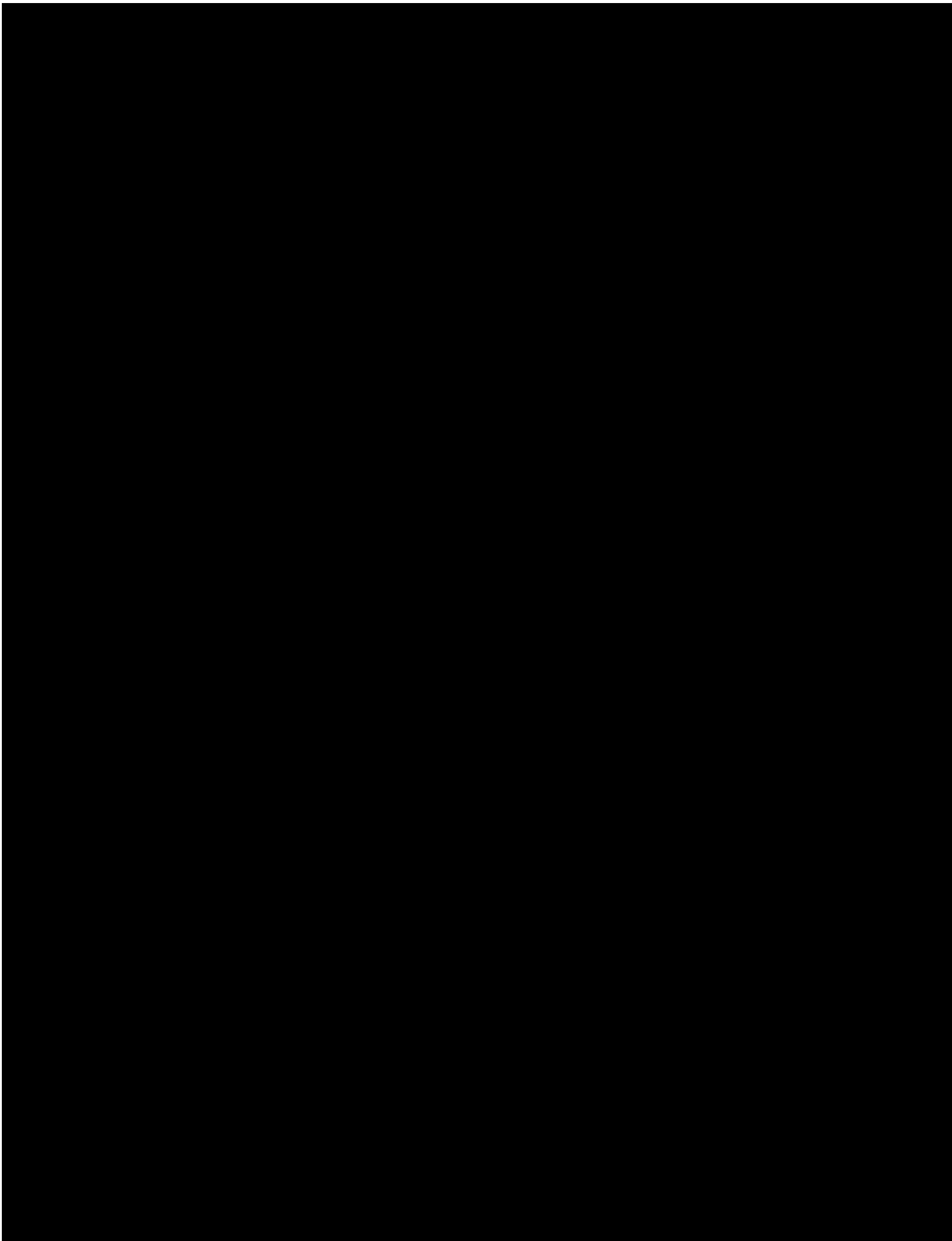


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The research was conducted using a quantitative approach, with data collected from a large sample of participants. The results show a significant positive correlation between the variables studied, indicating that the hypothesis was supported. The findings have important implications for the field and suggest that further research is needed to explore the underlying mechanisms.

In conclusion, the study provides valuable insights into the relationship between the variables and highlights the need for continued research in this area. The results are consistent with previous findings and offer new perspectives on the topic.





the 'information' and 'communication' fields. The 'information' field is defined as:

...the study of the processes of information production, distribution, access, use and evaluation, and the study of the social, cultural, economic and political contexts in which these processes take place. (p. 10)

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The 'information management' field is defined as:

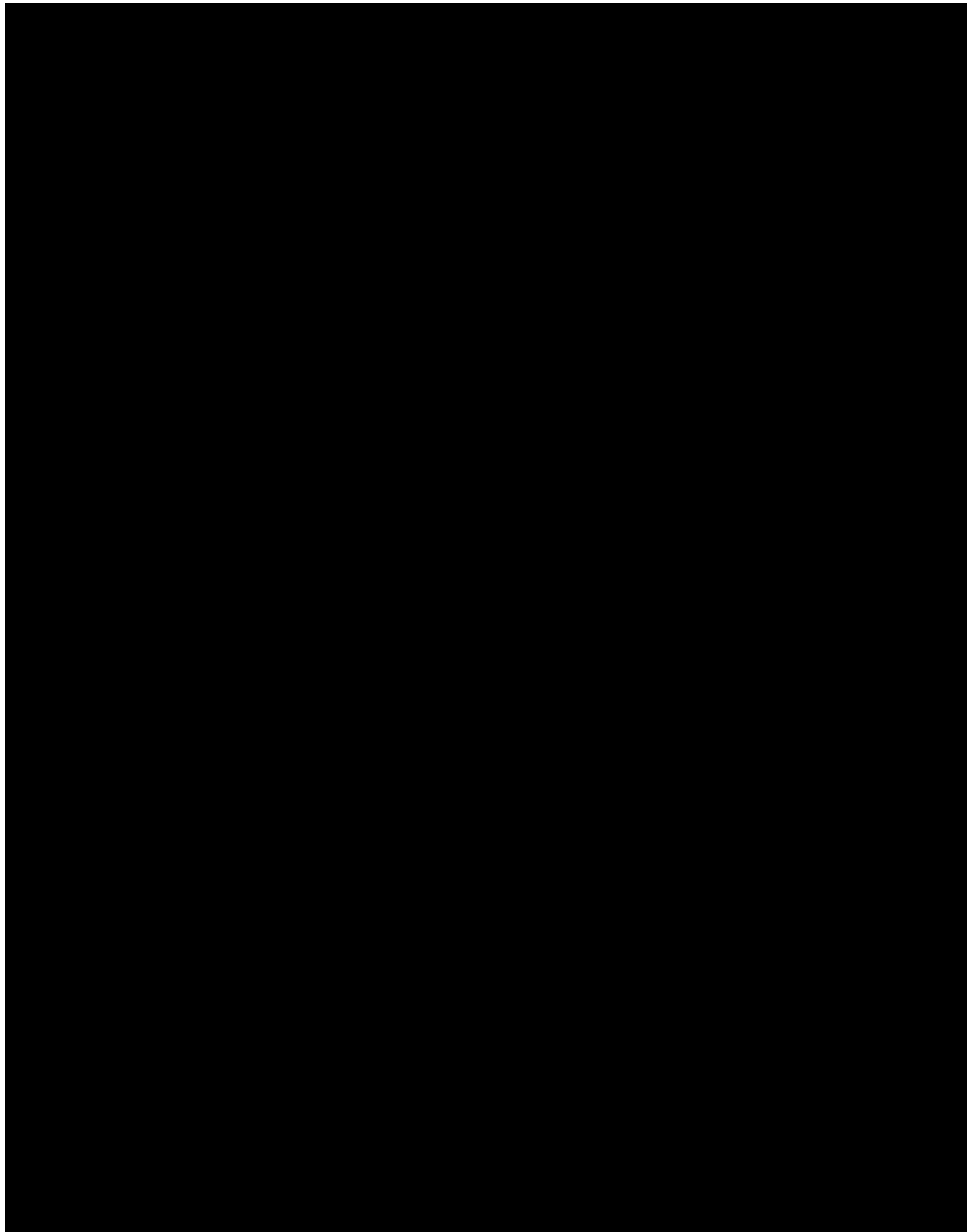
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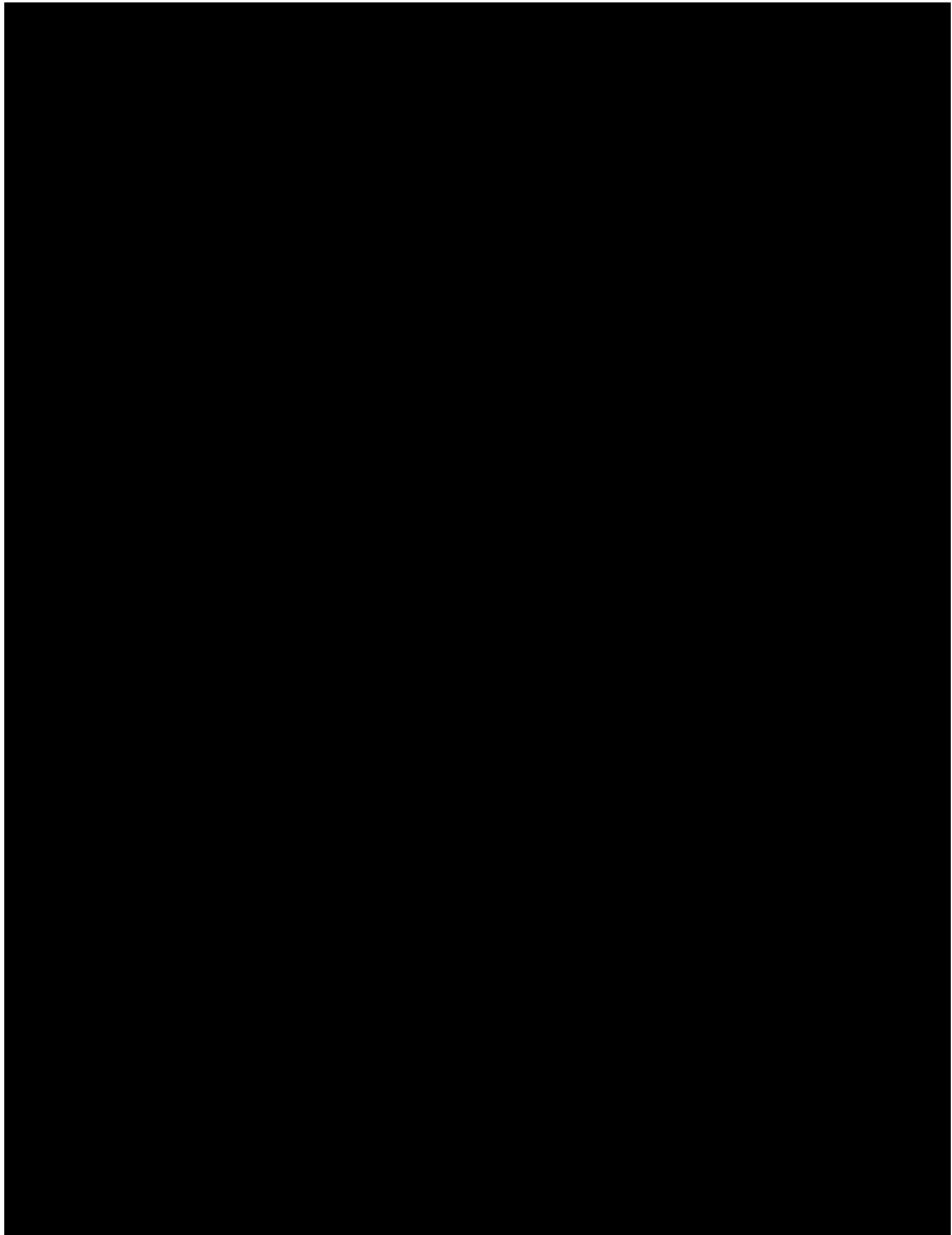
The 'information policy' field is defined as:

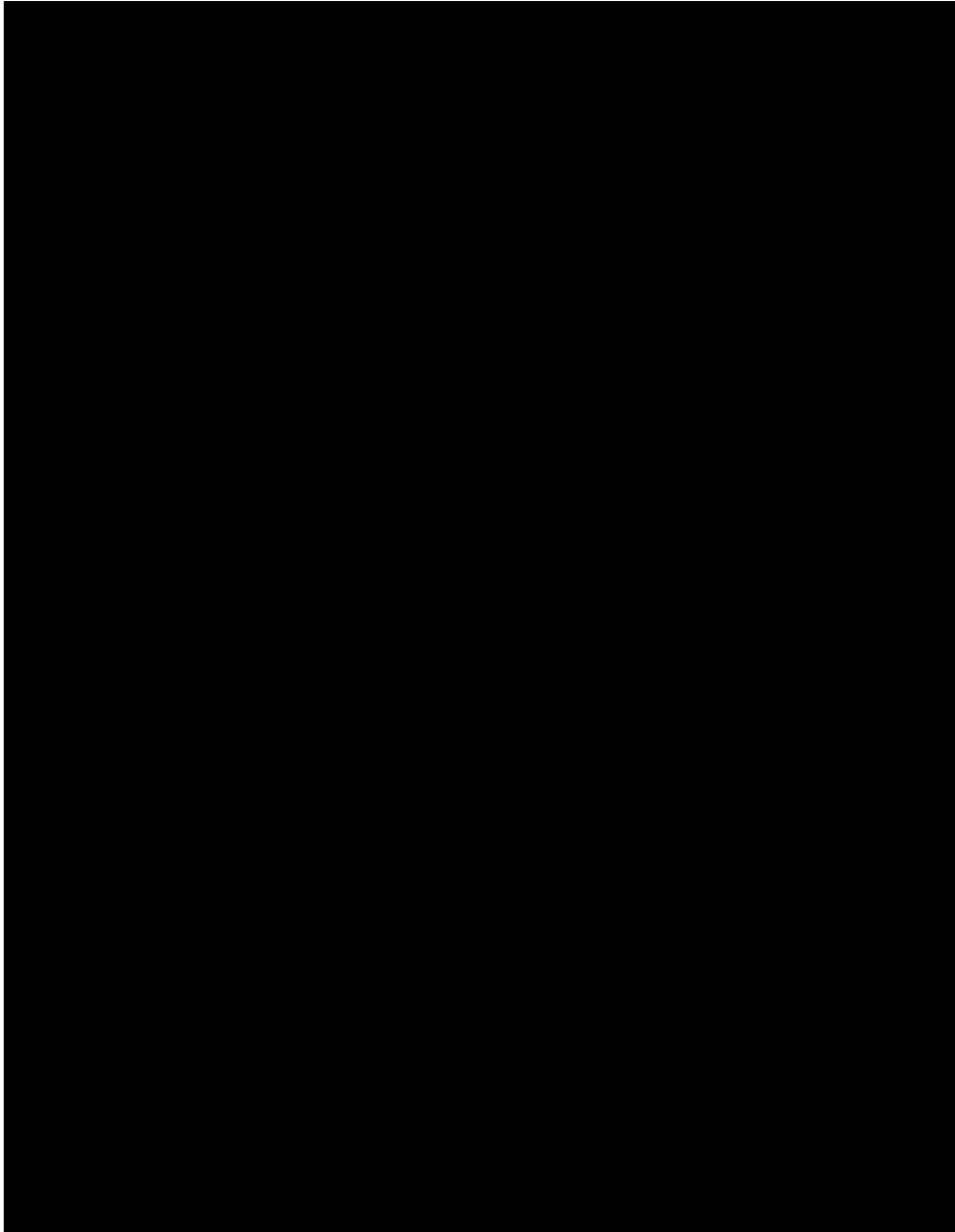
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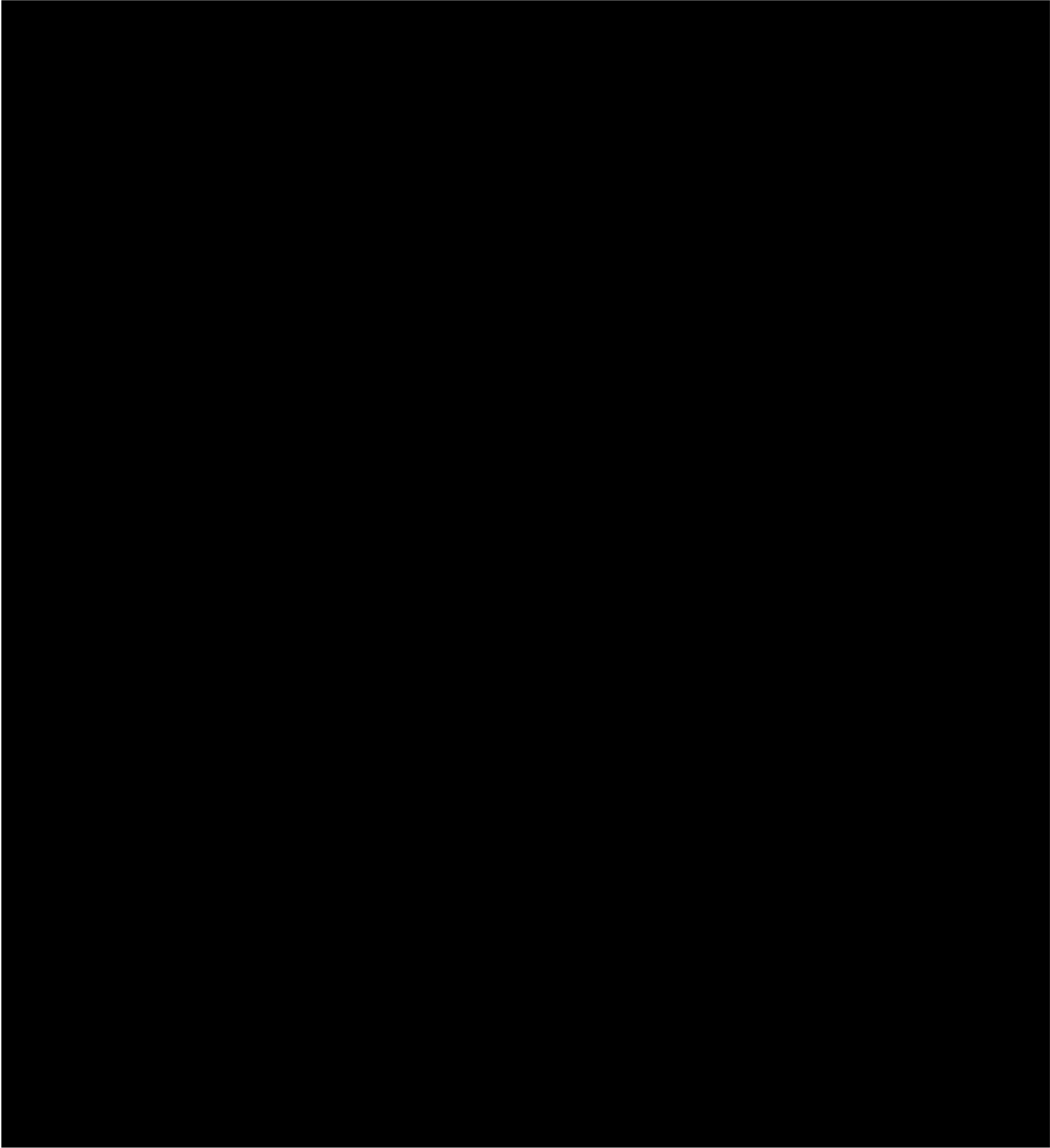
The 'information law' field is defined as:

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the 1990s, the incidence of *S. flexneri* infections has increased in the United Kingdom [10]. In the United States, *S. flexneri* has been reported as the most common serotype of *Shigella* isolated from children with shigellosis [11].

There is a paucity of data on the epidemiology of *S. flexneri* in the United Kingdom. In the 1970s, *S. flexneri* was the most commonly isolated *Shigella* serotype from patients with shigellosis in the United Kingdom [12]. In the 1980s, *S. flexneri* was the most commonly isolated *Shigella* serotype from patients with shigellosis in the United Kingdom [13].

In the 1990s, *S. flexneri* was the most commonly isolated *Shigella* serotype from patients with shigellosis in the United Kingdom [14]. In the 1990s, *S. flexneri* was the most commonly isolated *Shigella* serotype from patients with shigellosis in the United Kingdom [15].

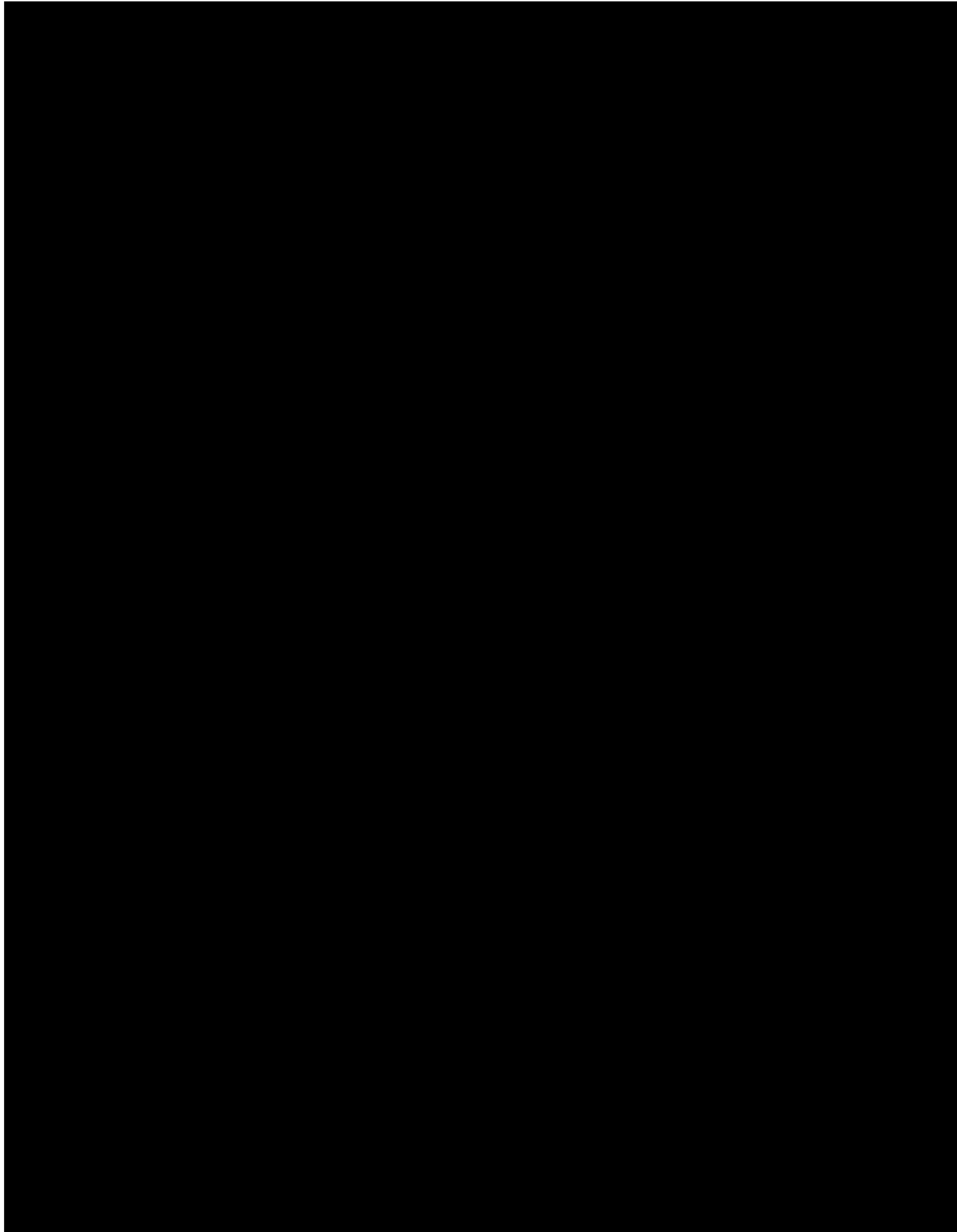
In the 1990s, *S. flexneri* was the most commonly isolated *Shigella* serotype from patients with shigellosis in the United Kingdom [16]. In the 1990s, *S. flexneri* was the most commonly isolated *Shigella* serotype from patients with shigellosis in the United Kingdom [17].

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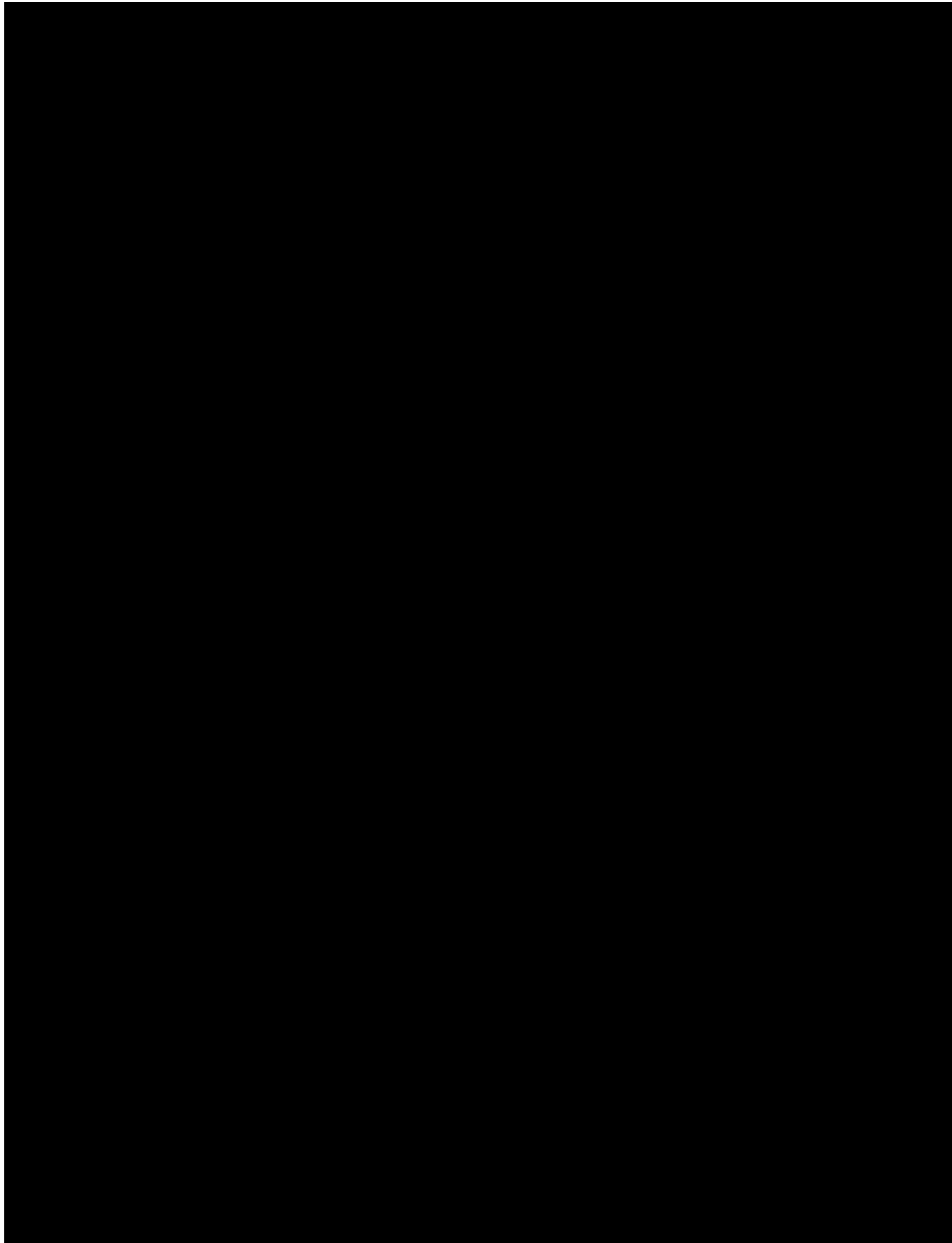
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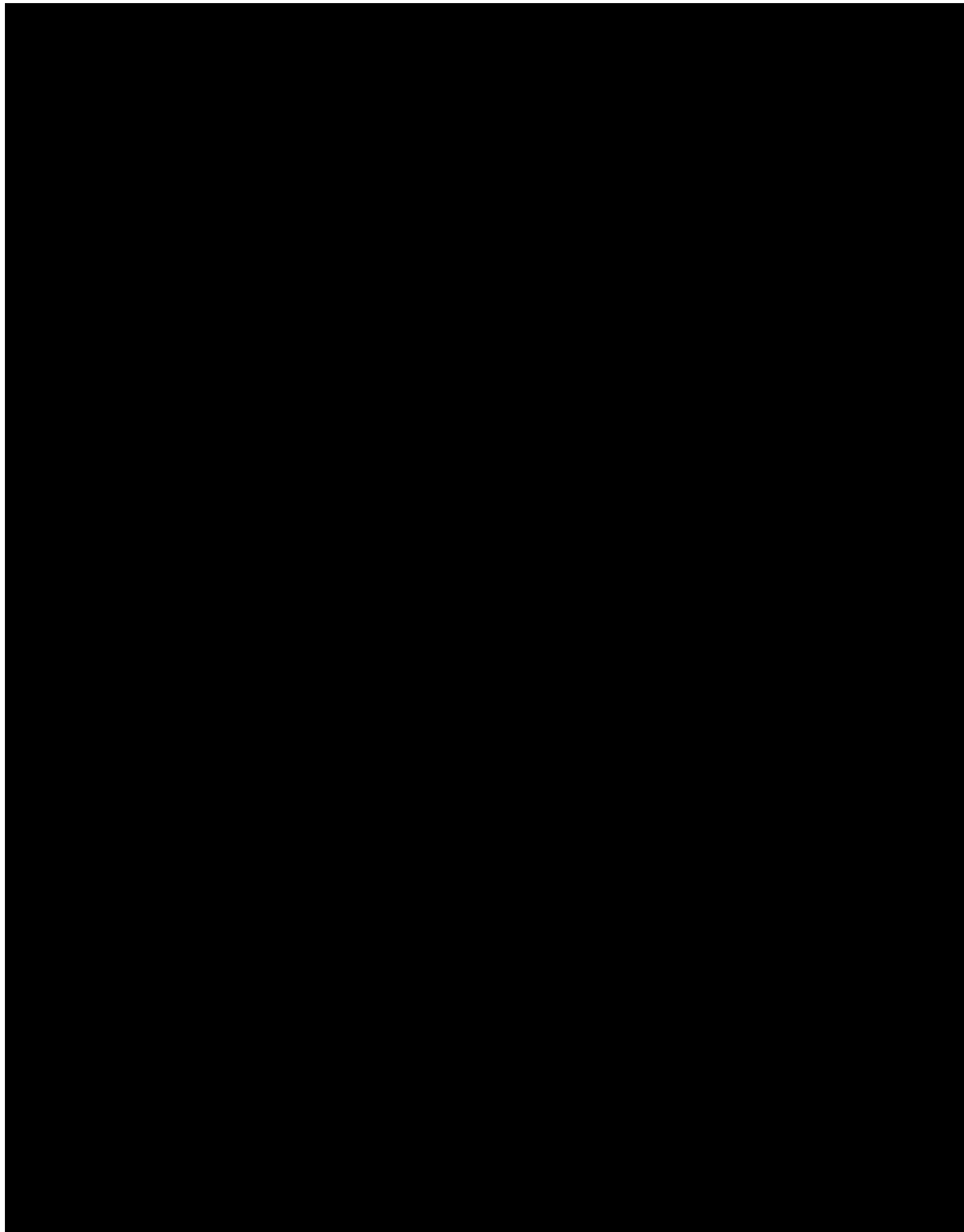
The first part of the paper discusses the importance of the research and the objectives of the study. It then presents a literature review of the existing research on the topic. The methodology section describes the research design and the data collection process. The results section presents the findings of the study, and the conclusion section summarizes the main findings and provides recommendations for future research.

The study was conducted in a laboratory setting, and the data were collected using a series of experiments. The results of the experiments were analyzed using statistical methods, and the findings were compared with the results of previous studies. The study found that the research objectives were achieved, and the results were consistent with the hypotheses.

The study has several limitations, and there are some areas for future research. The study was limited to a specific population, and the results may not be generalizable to other populations. The study also had a limited sample size, and the results may be affected by sampling error. Future research should investigate the effects of different variables on the results, and the study should be replicated with a larger sample size.

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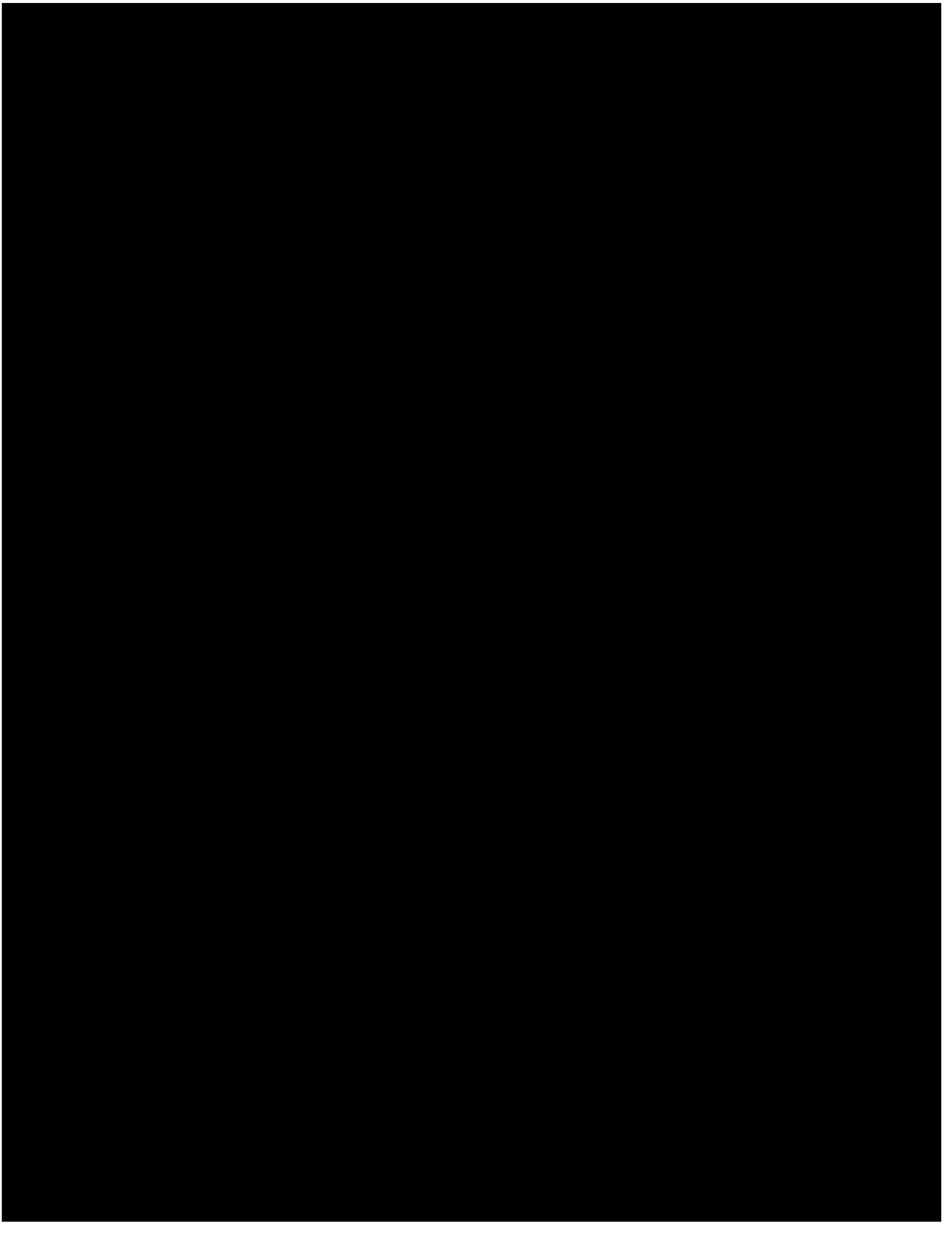
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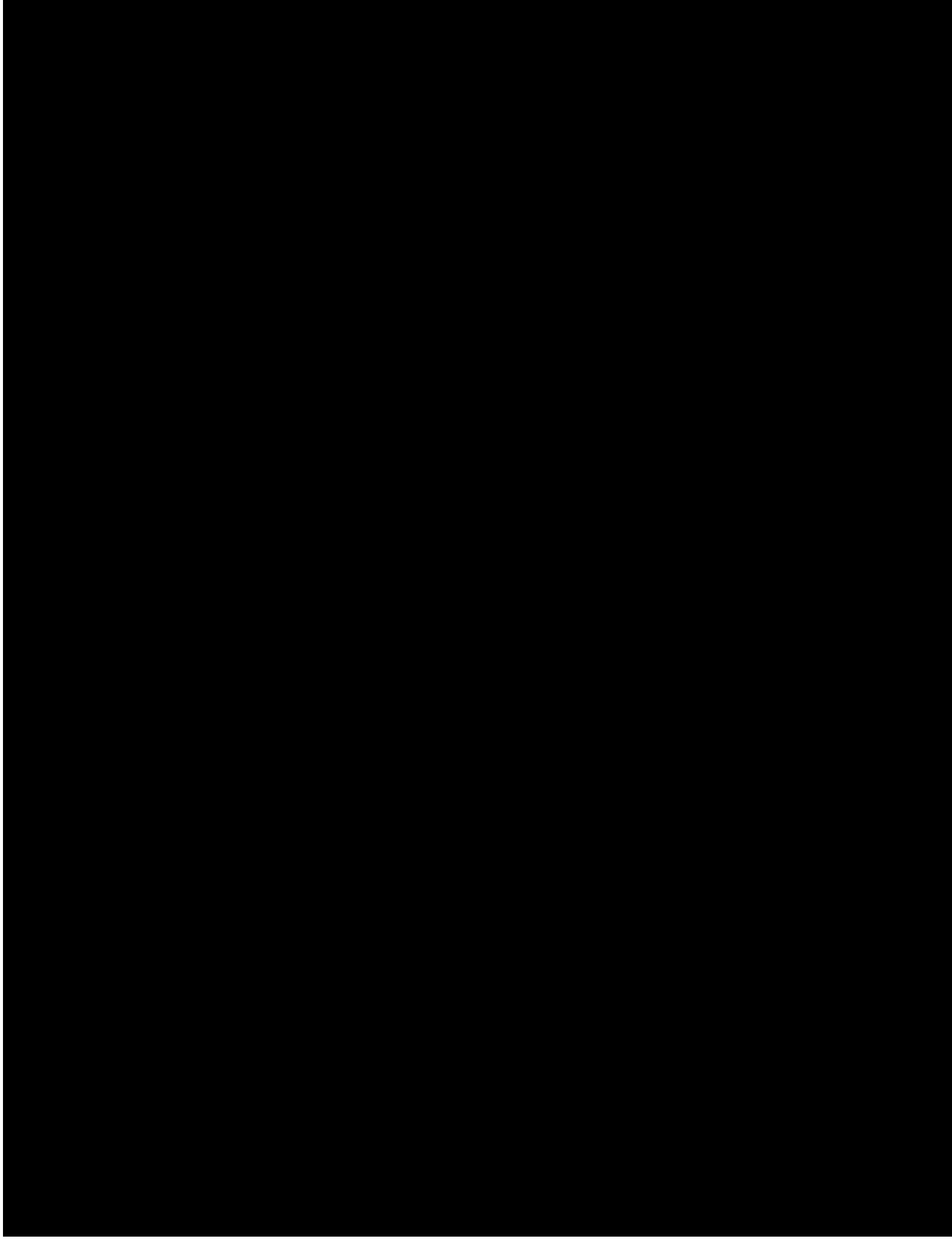
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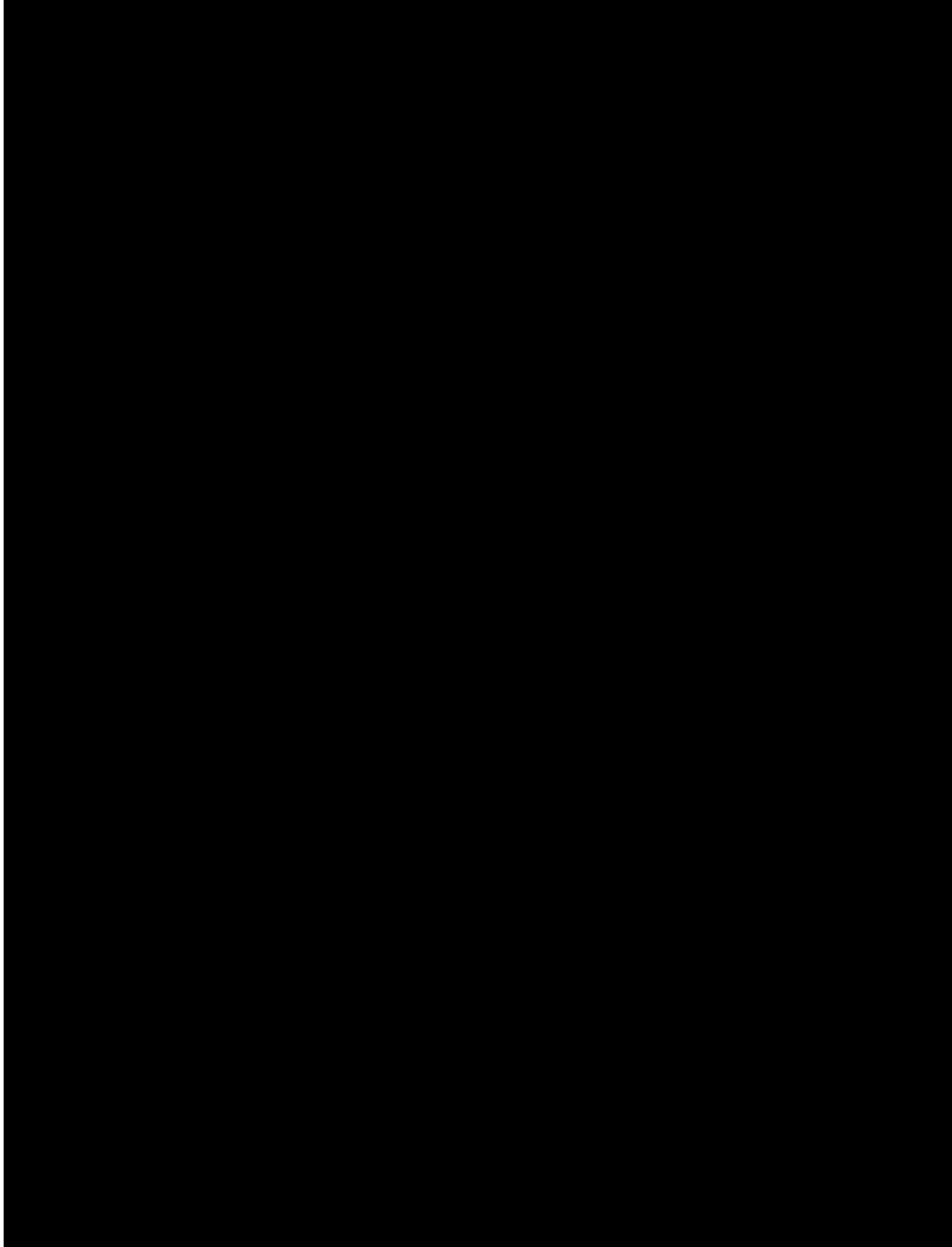
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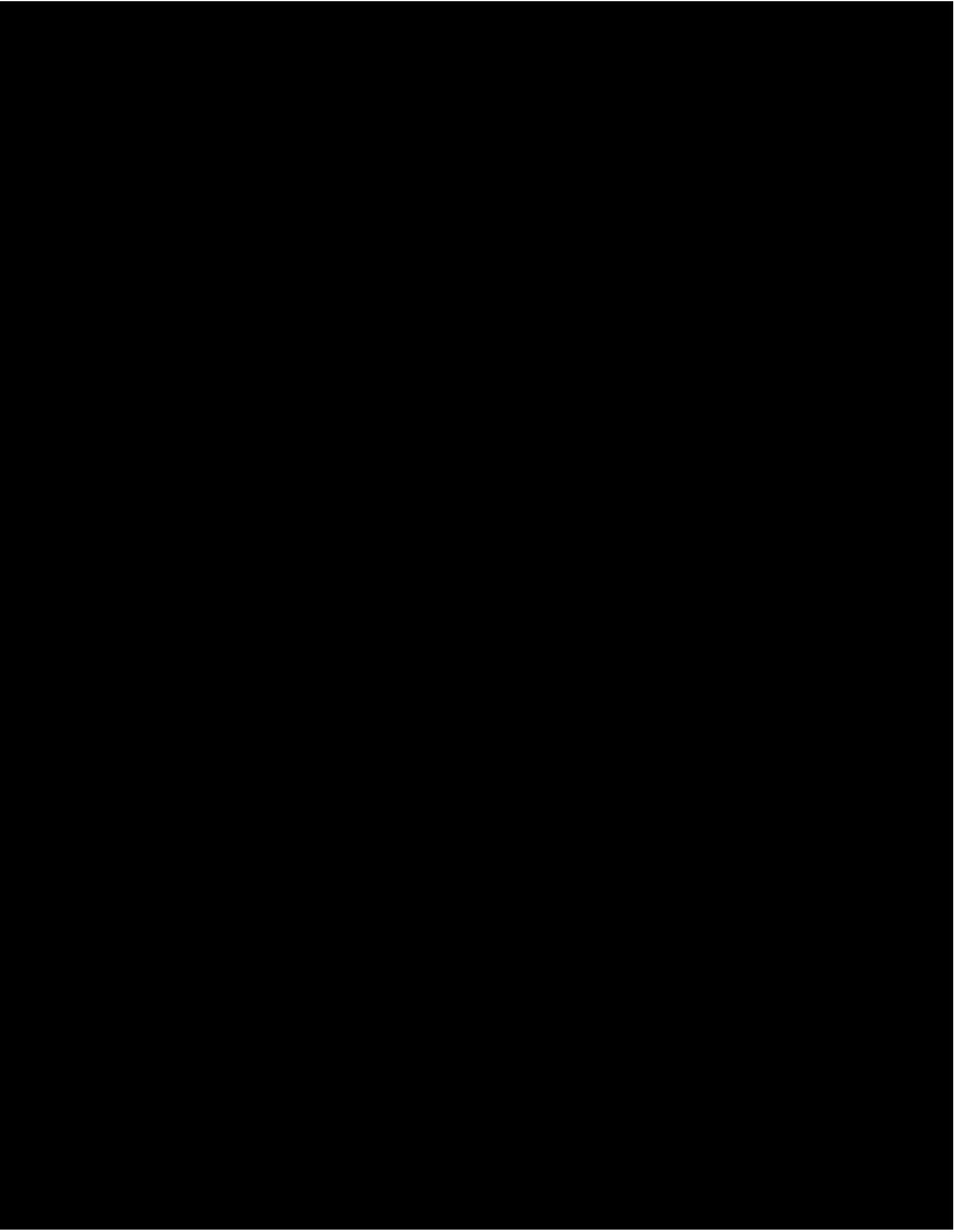


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The study was conducted using a quantitative research design. Data was collected from a sample of 100 participants, and the results were analyzed using statistical software. The findings of the study indicate that there is a significant relationship between the variables being studied.

The results of the study suggest that the research objectives have been achieved. The findings provide valuable insights into the topic and have implications for future research.

In conclusion, the study has shown that the research objectives have been achieved and that the findings have implications for future research.



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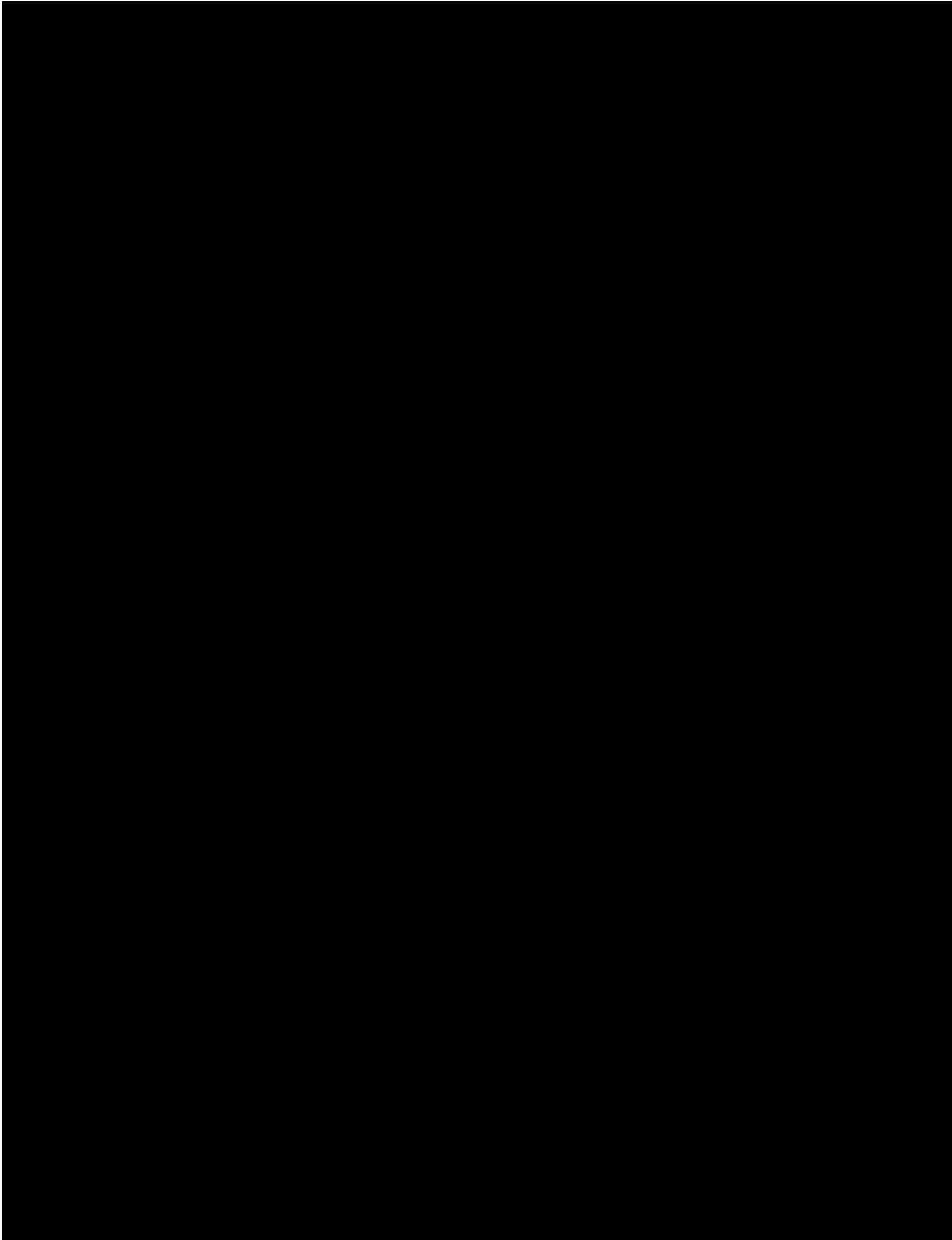
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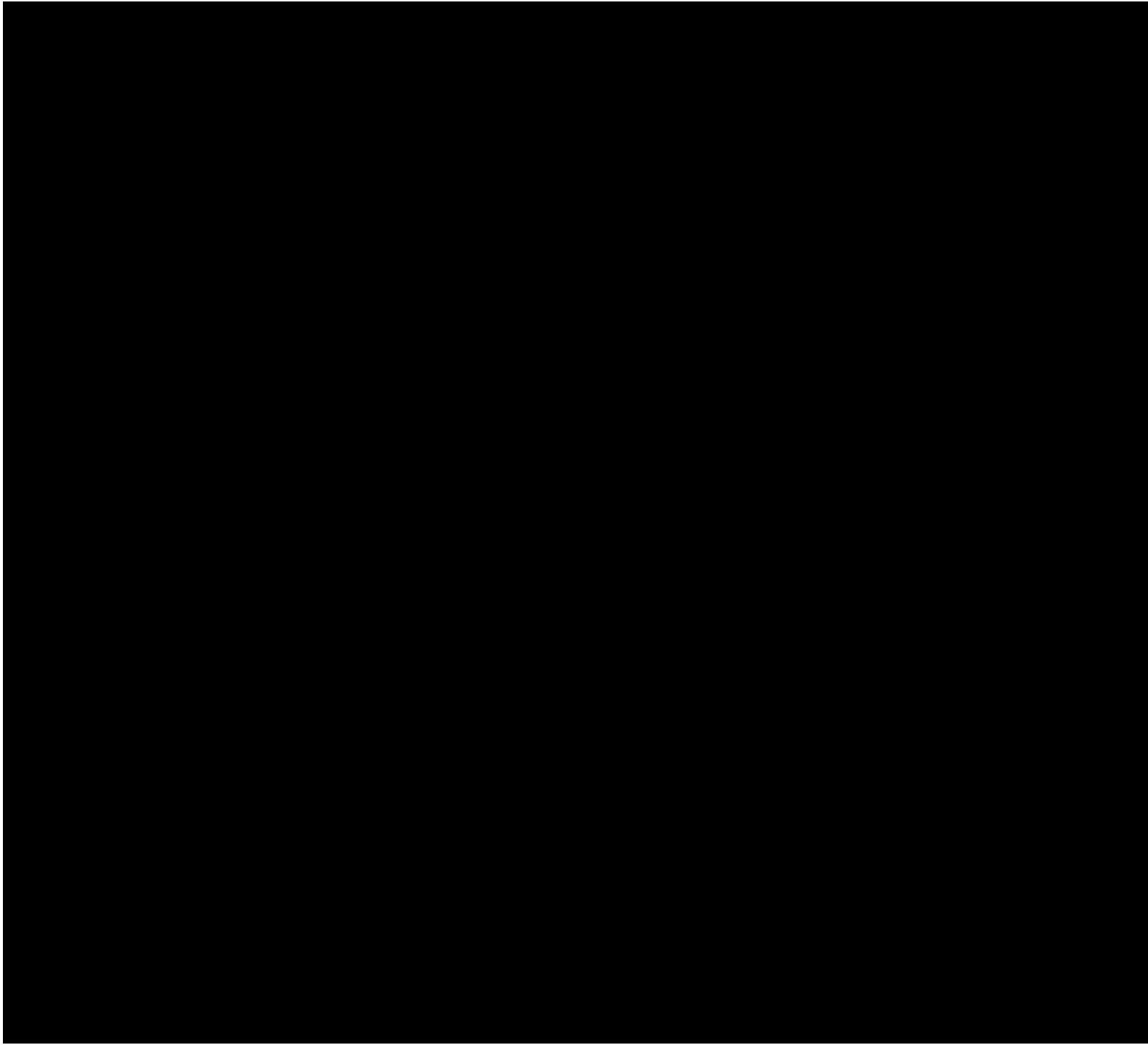
The research was conducted using a quantitative approach, with data collected from a large sample of participants. The results show a significant positive correlation between the variables studied, indicating that the research objectives have been achieved. The findings have important implications for the field and suggest areas for further investigation.

In conclusion, the study has provided valuable insights into the topic and contributes to the existing body of knowledge. The results are robust and reliable, and the methodology used is sound. The paper is well-structured and easy to read, making it a valuable resource for researchers and practitioners alike.

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the 1990s, the number of people in the UK who are aged 65 and over has increased by 1.5 million, and the number of people aged 75 and over has increased by 1.2 million (Office for National Statistics 2000). The number of people aged 65 and over is projected to increase to 10.5 million by 2020, and the number of people aged 75 and over to 7.5 million (Office for National Statistics 2000).

There is a growing awareness of the need to develop strategies to meet the needs of the ageing population. The Department of Health (1999) has identified the need to develop a 'new paradigm' for the care of the elderly, which is based on the principles of 'active ageing' and 'positive ageing'. The 'new paradigm' is based on the idea that ageing is a process, and that the needs of the elderly are not fixed, but change over time. The 'new paradigm' is based on the idea that the elderly are not a homogeneous group, and that the needs of different groups of elderly people are different.

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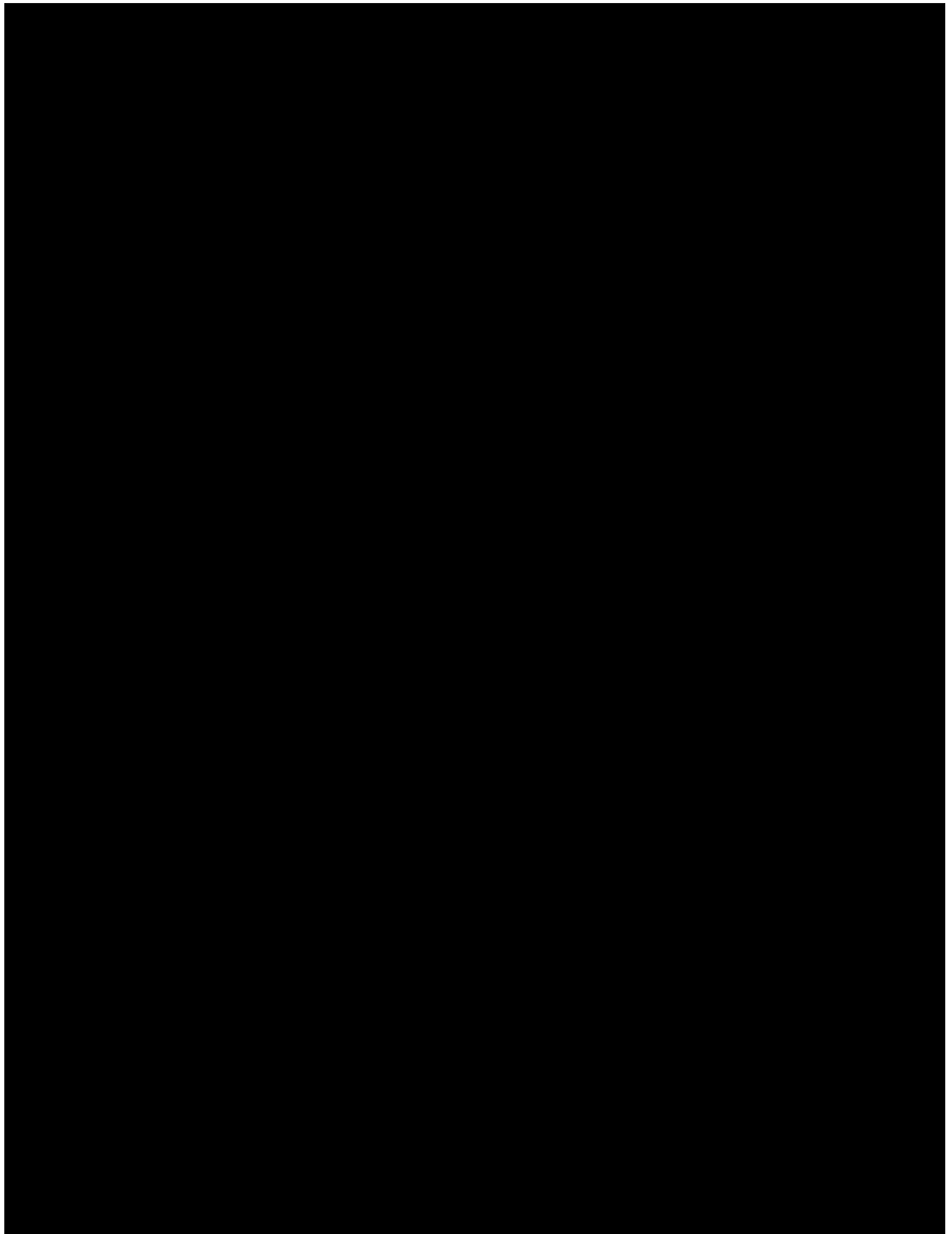
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the 1990s, the number of people in the UK who are employed in the public sector has increased by 1.5 million (from 2.5 million in 1980 to 4 million in 1998) and the number of people in the public sector who are employed in the health sector has increased by 1.2 million (from 1.3 million in 1980 to 2.5 million in 1998) (Department of Health 1999).

There is a growing emphasis on the need to improve the quality of care provided by the public sector. This has led to a number of initiatives, including the introduction of the Health Care Act 1999, which sets out a framework for the regulation of health care providers. The Act also sets out a number of objectives for the health care system, including the need to improve the quality of care, to ensure that care is safe, effective, and efficient, and to ensure that care is accessible to all.

One of the key challenges facing the health care system is the need to improve the quality of care. This is a complex task, as it involves a number of factors, including the quality of the staff, the quality of the facilities, and the quality of the care itself. There are a number of initiatives that are being undertaken to improve the quality of care, including the introduction of the Health Care Act 1999, the introduction of the Health Care Act 2001, and the introduction of the Health Care Act 2003.

The Health Care Act 1999 sets out a framework for the regulation of health care providers. The Act also sets out a number of objectives for the health care system, including the need to improve the quality of care, to ensure that care is safe, effective, and efficient, and to ensure that care is accessible to all. The Act also sets out a number of powers for the regulator, including the power to issue licences, to set standards, and to enforce standards.

The Health Care Act 2001 sets out a number of objectives for the health care system, including the need to improve the quality of care, to ensure that care is safe, effective, and efficient, and to ensure that care is accessible to all. The Act also sets out a number of powers for the regulator, including the power to issue licences, to set standards, and to enforce standards.

The Health Care Act 2003 sets out a number of objectives for the health care system, including the need to improve the quality of care, to ensure that care is safe, effective, and efficient, and to ensure that care is accessible to all. The Act also sets out a number of powers for the regulator, including the power to issue licences, to set standards, and to enforce standards.

There are a number of initiatives that are being undertaken to improve the quality of care, including the introduction of the Health Care Act 1999, the introduction of the Health Care Act 2001, and the introduction of the Health Care Act 2003. These initiatives are aimed at improving the quality of care, to ensure that care is safe, effective, and efficient, and to ensure that care is accessible to all.

The Health Care Act 1999 sets out a framework for the regulation of health care providers. The Act also sets out a number of objectives for the health care system, including the need to improve the quality of care, to ensure that care is safe, effective, and efficient, and to ensure that care is accessible to all. The Act also sets out a number of powers for the regulator, including the power to issue licences, to set standards, and to enforce standards.

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The first part of the paper discusses the importance of the research and the objectives of the study. It then presents a literature review of the existing research on the topic. The methodology section describes the research design and the data collection process. The results section presents the findings of the study, and the conclusion section summarizes the main findings and provides recommendations for future research.

The study was conducted in a laboratory setting. The participants were recruited from a local university and were assigned to two groups: the experimental group and the control group. The experimental group received the intervention, while the control group did not. The data was collected over a period of six weeks.

The results of the study show that the intervention had a significant positive effect on the outcome variable. The experimental group showed a significant improvement in the outcome variable compared to the control group. The findings suggest that the intervention is effective in improving the outcome variable.

The conclusion of the study is that the intervention is effective in improving the outcome variable. The findings suggest that the intervention is a promising approach for improving the outcome variable. Further research is needed to confirm the findings and to explore the long-term effects of the intervention.

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The study was conducted using a quantitative research design. Data was collected from a sample of 100 participants using a survey questionnaire. The questionnaire was designed to measure the variables of interest in the study. The data was then analyzed using statistical software to determine the relationships between the variables.

The results of the study show that there is a significant positive relationship between the variables. This finding is consistent with the previous research in the field. The study also found that there are some differences in the results between the different groups of participants.

The conclusions of the study suggest that the findings have important implications for practice and policy. Further research is needed to explore the relationships between the variables in more detail.

the 1990s, the number of people in the UK who are aged 65 and over has increased by 1.5 million (1990–1999) and is projected to increase by a further 1.5 million by 2010 (Office of National Statistics 2000). The number of people aged 65 and over is projected to increase by 2.5 million by 2020 (Office of National Statistics 2000).

There is a growing awareness of the need to develop strategies to meet the needs of the ageing population. The Department of Health (1999) has identified the need to develop a 'new paradigm' for the care of the ageing population. This paradigm is based on the principle of 'active ageing', which is the process of maintaining and enhancing the functional ability of older people to live independently and to participate in the community. The Department of Health (1999) has identified a number of key areas for action in order to achieve this paradigm, including: (1) the development of a 'new paradigm' for the care of the ageing population; (2) the development of a 'new paradigm' for the care of the ageing population; (3) the development of a 'new paradigm' for the care of the ageing population.

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the 1990s, the number of people in the UK who are employed in the public sector has increased by 1.5 million (1990–1999) (Department of Health 2000).

There is a growing emphasis on the need to improve the quality of care in the public sector. The Department of Health (2000) has set out a number of key objectives for the public sector, including the need to improve the quality of care, to reduce waiting times, to improve the efficiency of the system, and to improve the experience of patients and staff.

One of the key challenges facing the public sector is the need to improve the quality of care. This is a complex task, as it involves a range of factors, including the quality of the staff, the quality of the facilities, and the quality of the processes.

One of the key factors that can affect the quality of care is the quality of the staff. This includes the quality of the training, the quality of the experience, and the quality of the attitudes.

Another key factor is the quality of the facilities. This includes the quality of the buildings, the quality of the equipment, and the quality of the environment.

Finally, the quality of the processes is also a key factor. This includes the quality of the procedures, the quality of the communication, and the quality of the decision-making.

Improving the quality of care in the public sector is a complex task, but it is one that is essential for the future of the health system.

There are a number of ways in which the quality of care can be improved. These include the following:

1. Improving the quality of the staff: This can be done by providing better training, by providing better experience, and by improving the attitudes of the staff.

2. Improving the quality of the facilities: This can be done by improving the buildings, by improving the equipment, and by improving the environment.

3. Improving the quality of the processes: This can be done by improving the procedures, by improving the communication, and by improving the decision-making.

These are just a few of the ways in which the quality of care can be improved. There are many other factors that can affect the quality of care, and it is important to consider all of them when developing a strategy for improvement.

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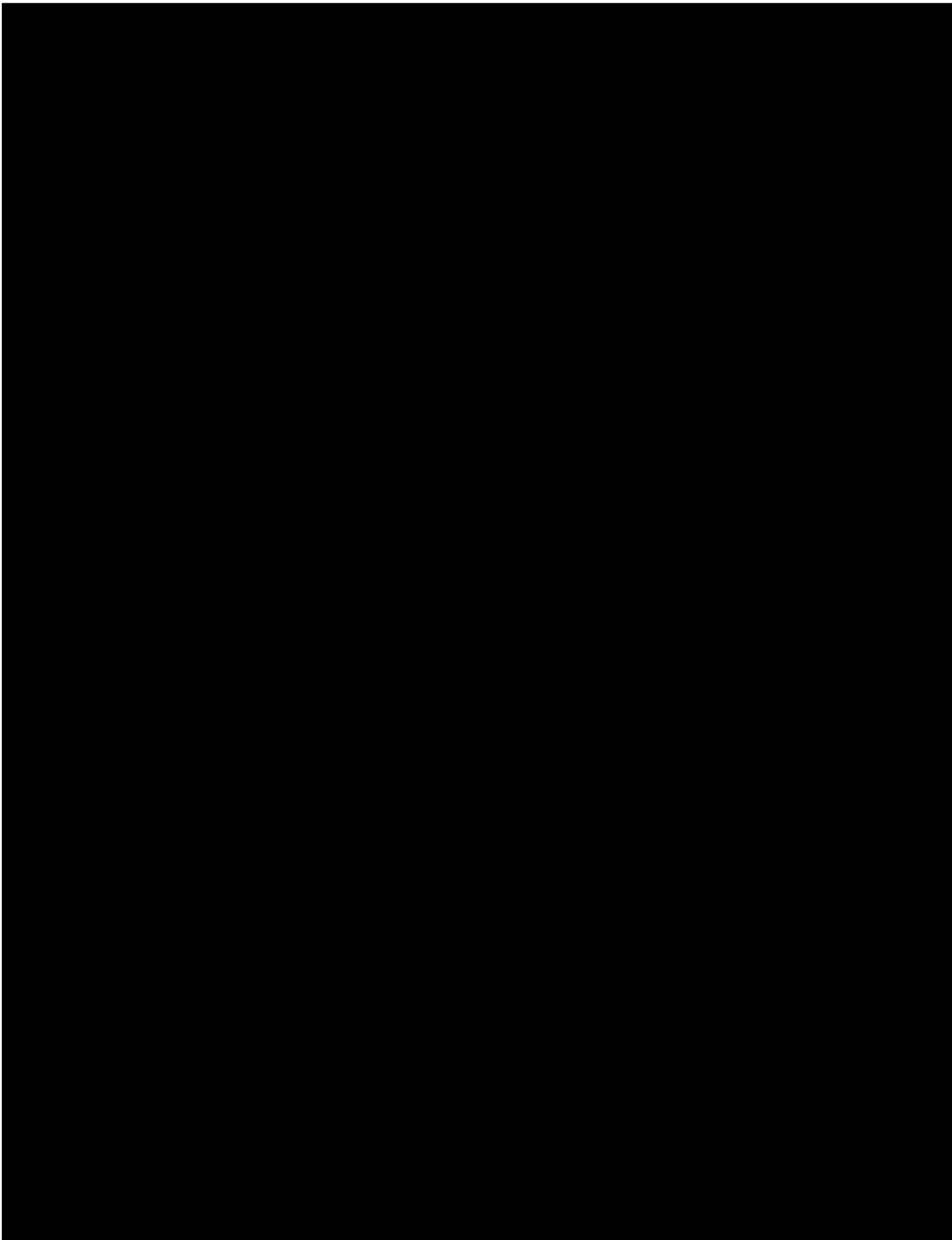
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There is a growing awareness of the need to address the needs of older people in the UK. The Department of Health (2000) has published a strategy for older people, which sets out the government's commitment to improve the lives of older people. The strategy is based on three main principles: (1) to ensure that older people have the opportunity to live independently and actively; (2) to ensure that older people have access to the services and support they need; and (3) to ensure that older people are treated with respect and dignity. The strategy is being implemented through a range of measures, including: (1) improving the quality of care in residential care homes; (2) increasing the number of care workers; (3) improving the training of care workers; (4) increasing the number of care workers who are trained in dementia care; (5) increasing the number of care workers who are trained in mental health care; and (6) increasing the number of care workers who are trained in physical health care.

The Department of Health (2000) has also published a strategy for mental health care, which sets out the government's commitment to improve the lives of people with mental health problems. The strategy is based on three main principles: (1) to ensure that people with mental health problems have the opportunity to live independently and actively; (2) to ensure that people with mental health problems have access to the services and support they need; and (3) to ensure that people with mental health problems are treated with respect and dignity. The strategy is being implemented through a range of measures, including: (1) improving the quality of care in mental health hospitals; (2) increasing the number of mental health workers; (3) improving the training of mental health workers; (4) increasing the number of mental health workers who are trained in dementia care; (5) increasing the number of mental health workers who are trained in mental health care; and (6) increasing the number of mental health workers who are trained in physical health care.

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There is a growing emphasis on the need to improve the efficiency of the public sector and to ensure that the public sector is able to deliver the best possible value for money. This has led to a number of initiatives, including the introduction of the Health Service Act 1999, the Health Service Act 2001, and the Health Service Act 2004. These initiatives have led to a number of changes in the way the public sector is organised and managed, and to a number of changes in the way the public sector is funded.

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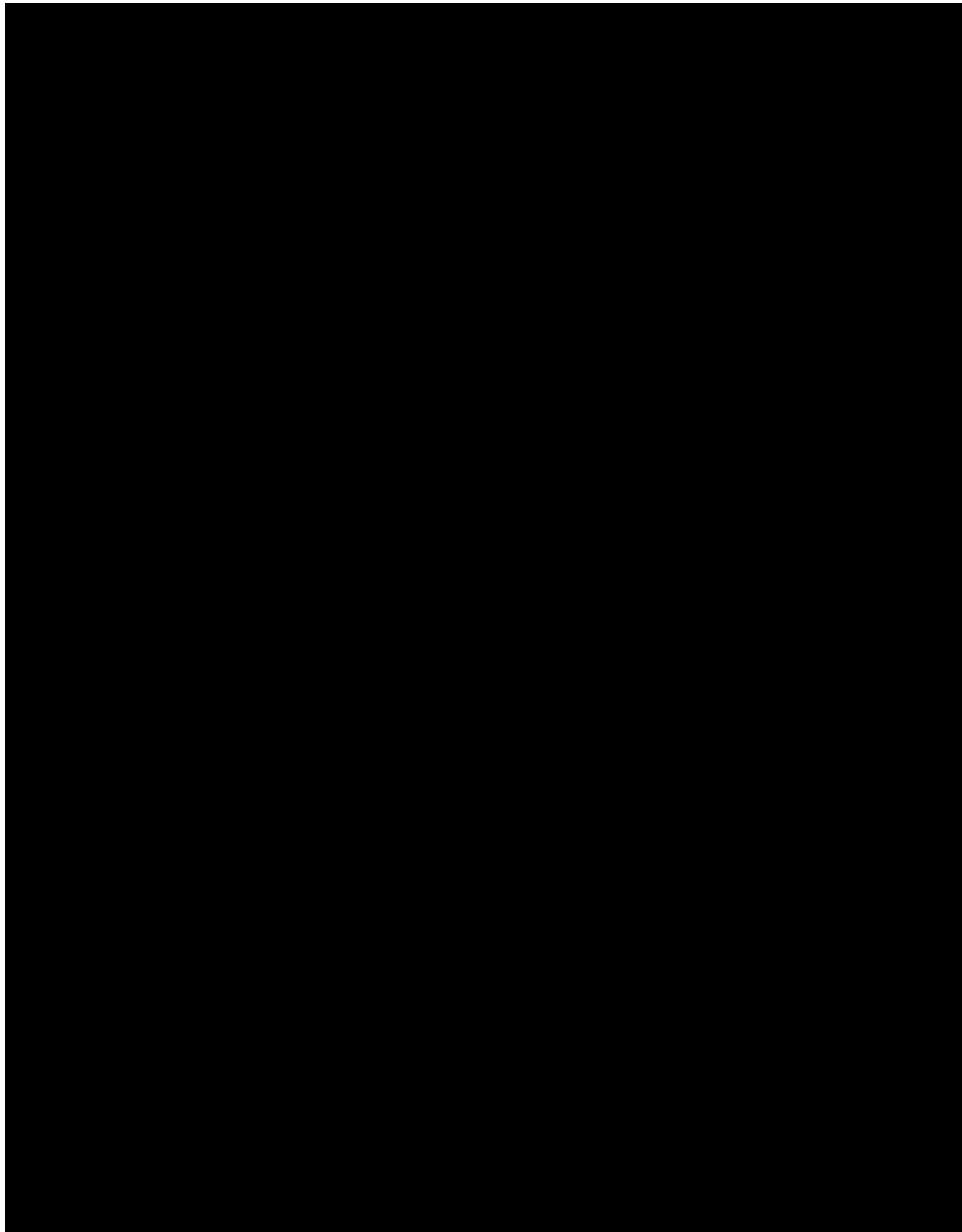
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The research was conducted in a systematic and rigorous manner, following the principles of good research practice. The data was collected from a representative sample of the population, and the analysis was carried out using appropriate statistical methods. The results of the study are presented in a clear and concise manner, and the implications of the findings are discussed in detail.

The findings of the study have important implications for the field of research. They provide valuable insights into the nature of the phenomenon being studied, and they suggest areas for further research. The results also have practical implications for the development of policies and programs aimed at addressing the issue.

In conclusion, the study has made a significant contribution to the understanding of the topic. The findings are robust and reliable, and they provide a solid basis for further research and for the development of effective interventions.



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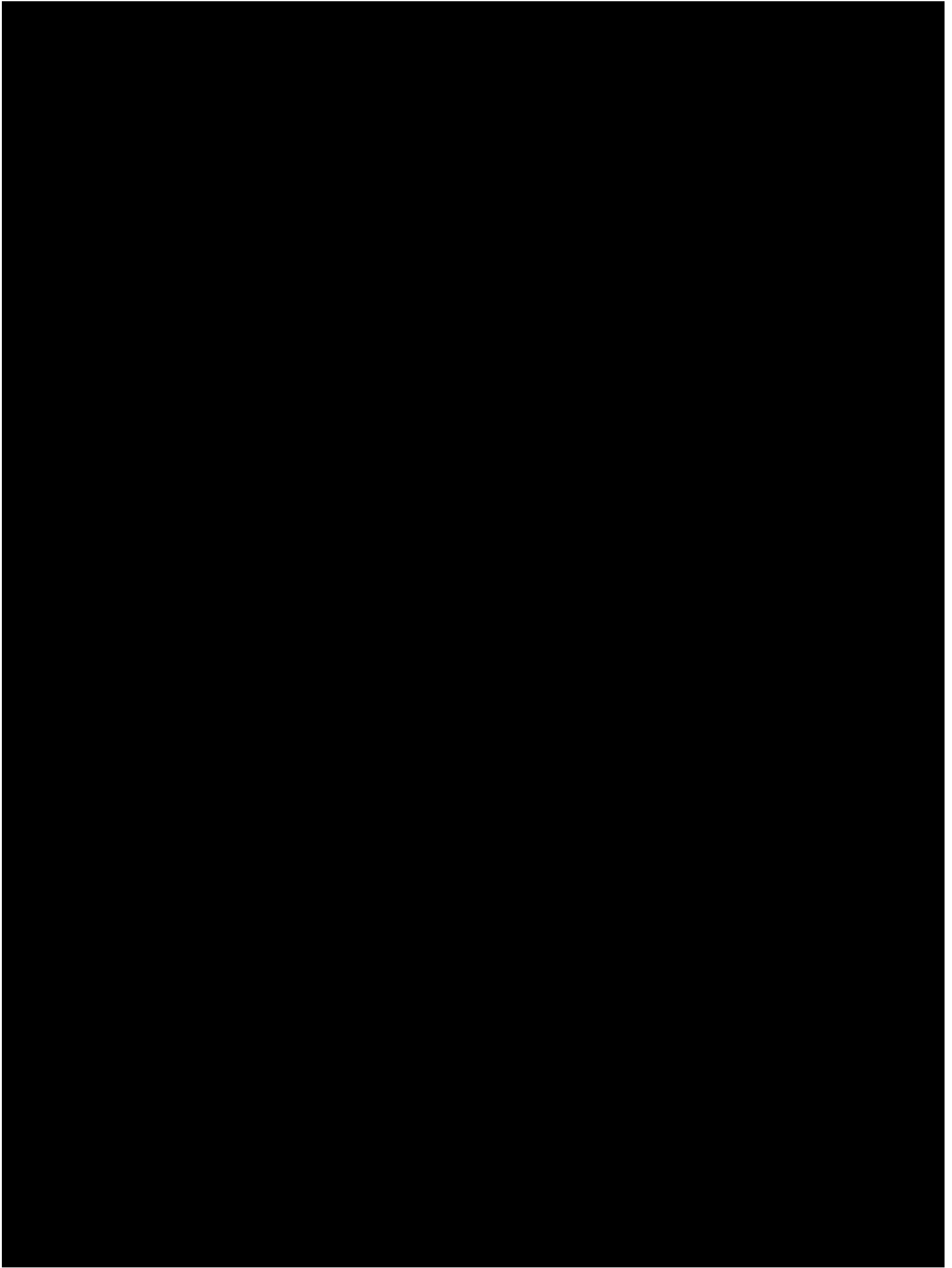
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the 1990s, the incidence of *S. flexneri* has increased in the United Kingdom [10]. In the United States, *S. flexneri* has been reported as the most common serotype in children with acute bacterial dysentery [11].

There is a paucity of data on the epidemiology of *S. flexneri* in the United Kingdom. In the 1980s, *S. flexneri* was the most commonly isolated serotype from patients with acute bacterial dysentery in the United Kingdom [12]. In the 1990s, *S. flexneri* was the most commonly isolated serotype from patients with acute bacterial dysentery in the United Kingdom [13].

The purpose of this study was to determine the prevalence of *S. flexneri* in the United Kingdom. The study was designed to determine the prevalence of *S. flexneri* in the United Kingdom. The study was designed to determine the prevalence of *S. flexneri* in the United Kingdom.

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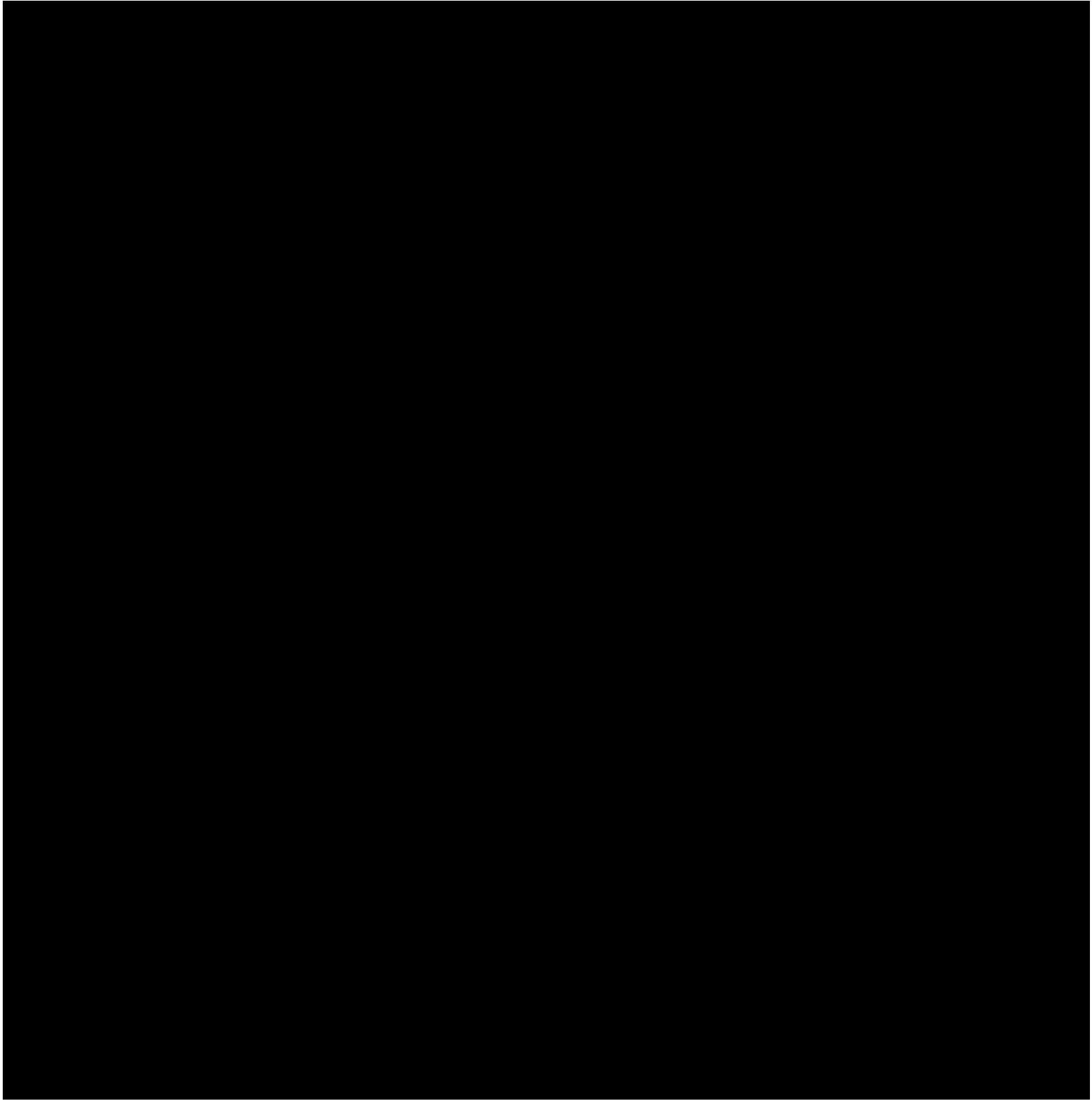
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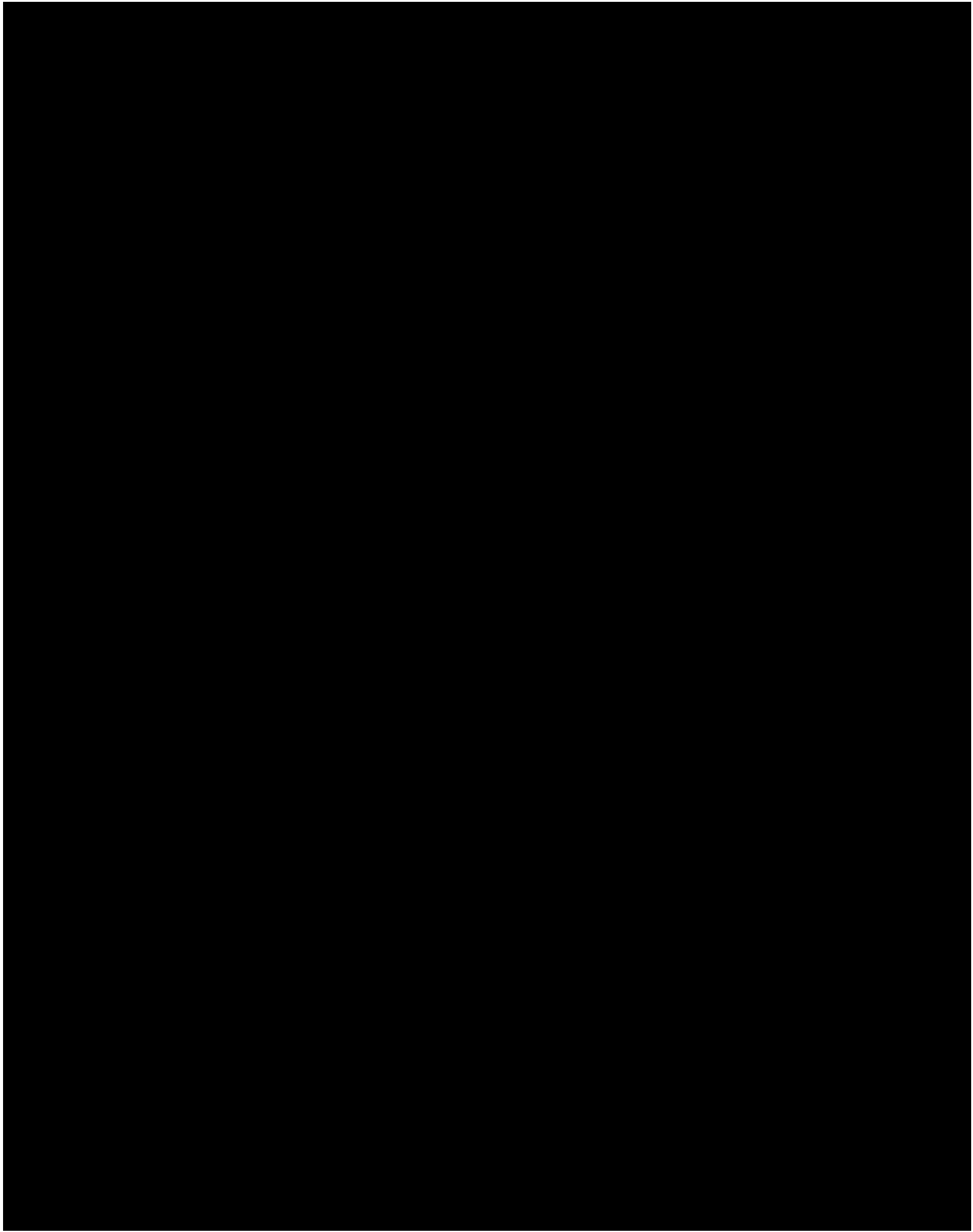
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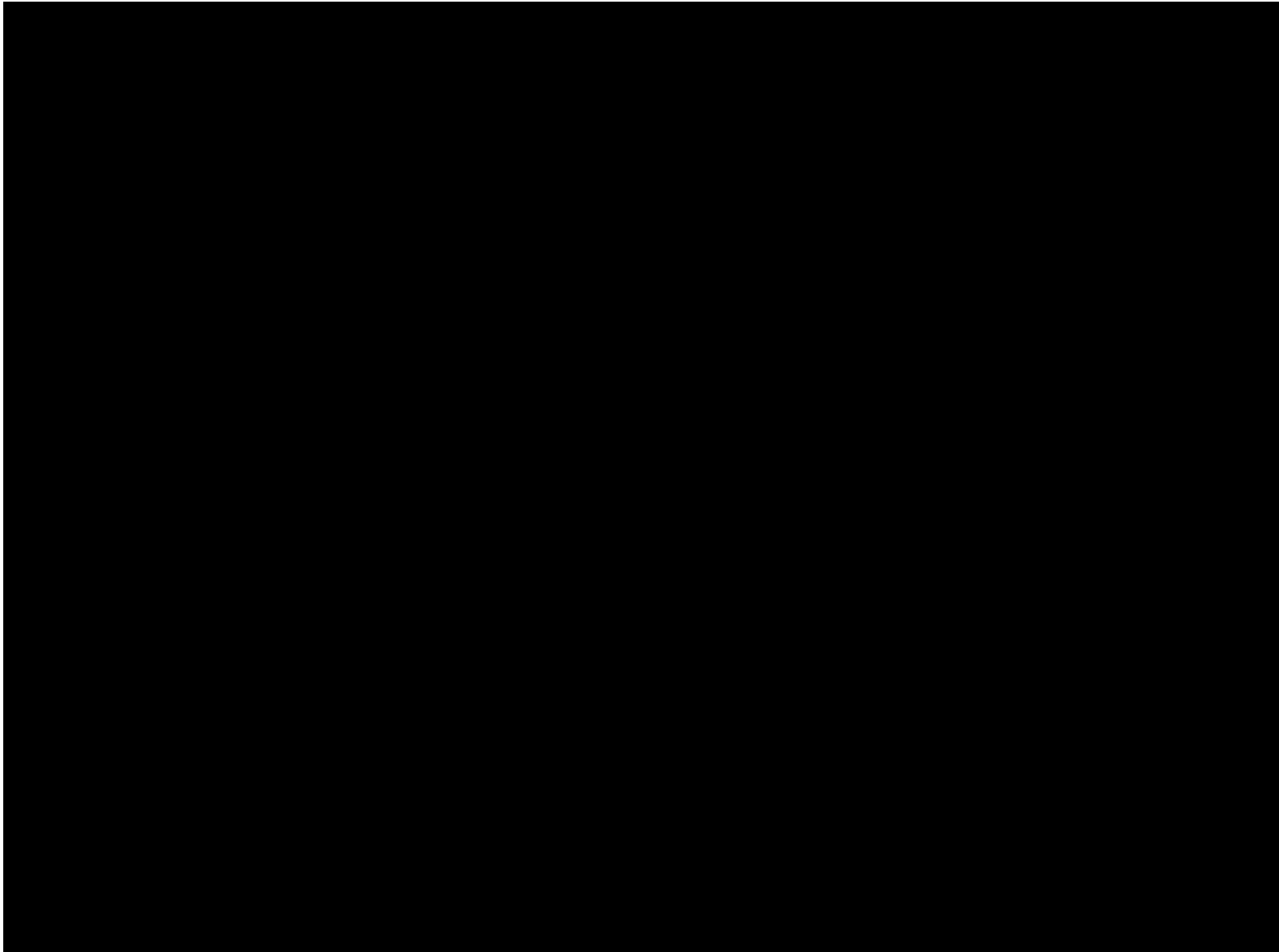
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There is a growing awareness of the need to address the health and social care needs of the young and the old. The World Health Organization (WHO) has identified the need to address the health and social care needs of the young and the old as one of its major priorities (WHO 1999). The WHO has identified the need to address the health and social care needs of the young and the old as one of its major priorities (WHO 1999).

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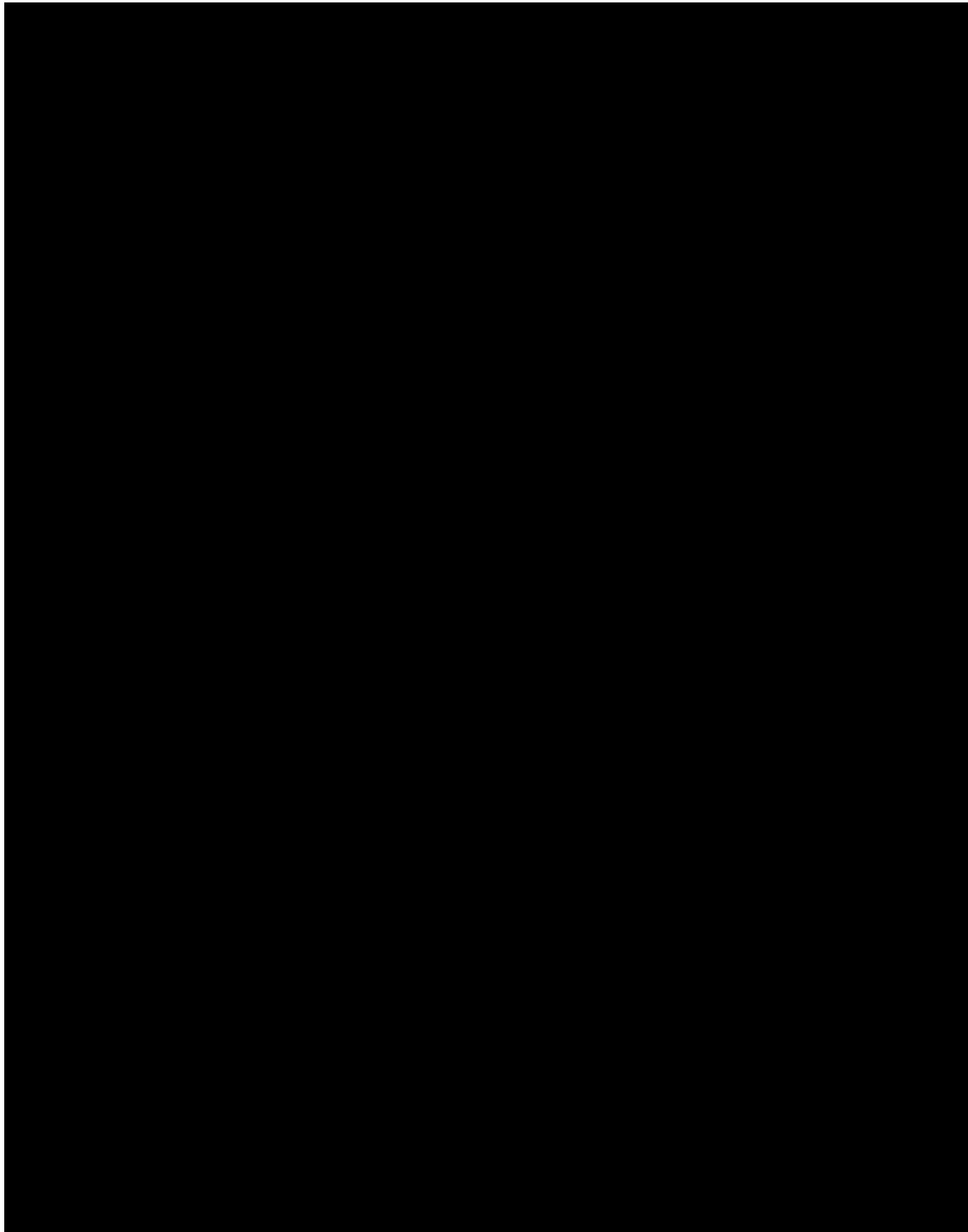
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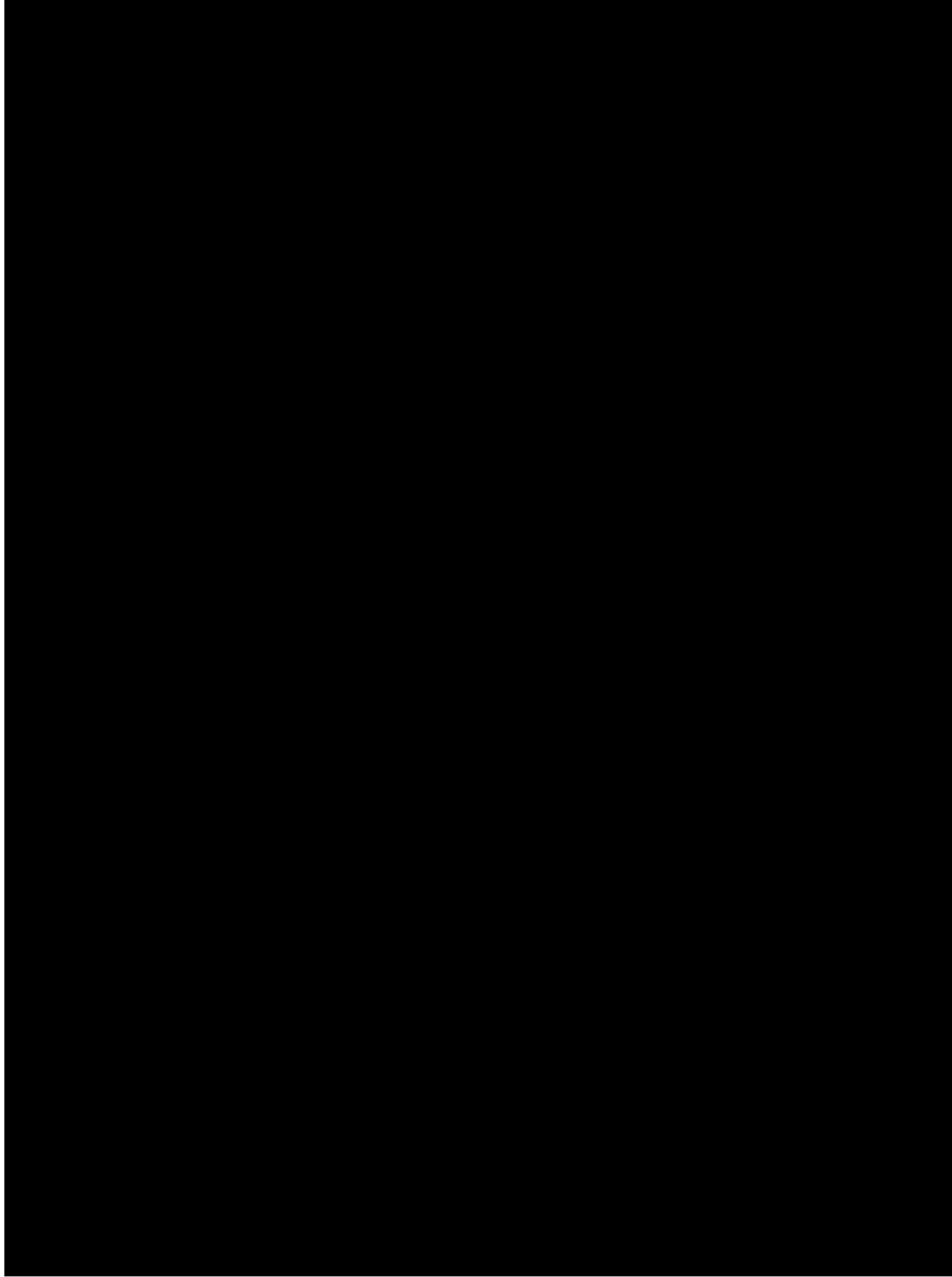
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the 'information' and 'communication' fields. The 'information' field is defined as:

...the study of the nature, uses and functions of information, and the ways in which it is created, communicated, evaluated and used; and the study of the ways in which information is organised, stored, retrieved and disseminated in the various forms and media, and the ways in which these processes are influenced by social, cultural, economic and technological factors. (p. 1)

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the 1990s, the number of people in the UK who are employed in the public sector has increased by 1.5 million, from 2.5 million in 1980 to 4 million in 1995. The public sector has become a major employer in the UK, and its growth has been a key factor in the overall growth of the economy.

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There is a paucity of data on the epidemiology of *S. flexneri* in the United Kingdom. In the 1980s, *S. flexneri* was reported as the most common serotype in children with acute bacterial dysentery [12]. In the 1990s, *S. flexneri* was reported as the most common serotype in children with acute bacterial dysentery [13]. In the 2000s, *S. flexneri* was reported as the most common serotype in children with acute bacterial dysentery [14].

The aim of this study was to determine the prevalence of *S. flexneri* in children with acute bacterial dysentery in the United Kingdom. The study was conducted in the United Kingdom, where *S. flexneri* is the most common serotype in children with acute bacterial dysentery [12]. The study was conducted in the United Kingdom, where *S. flexneri* is the most common serotype in children with acute bacterial dysentery [12].

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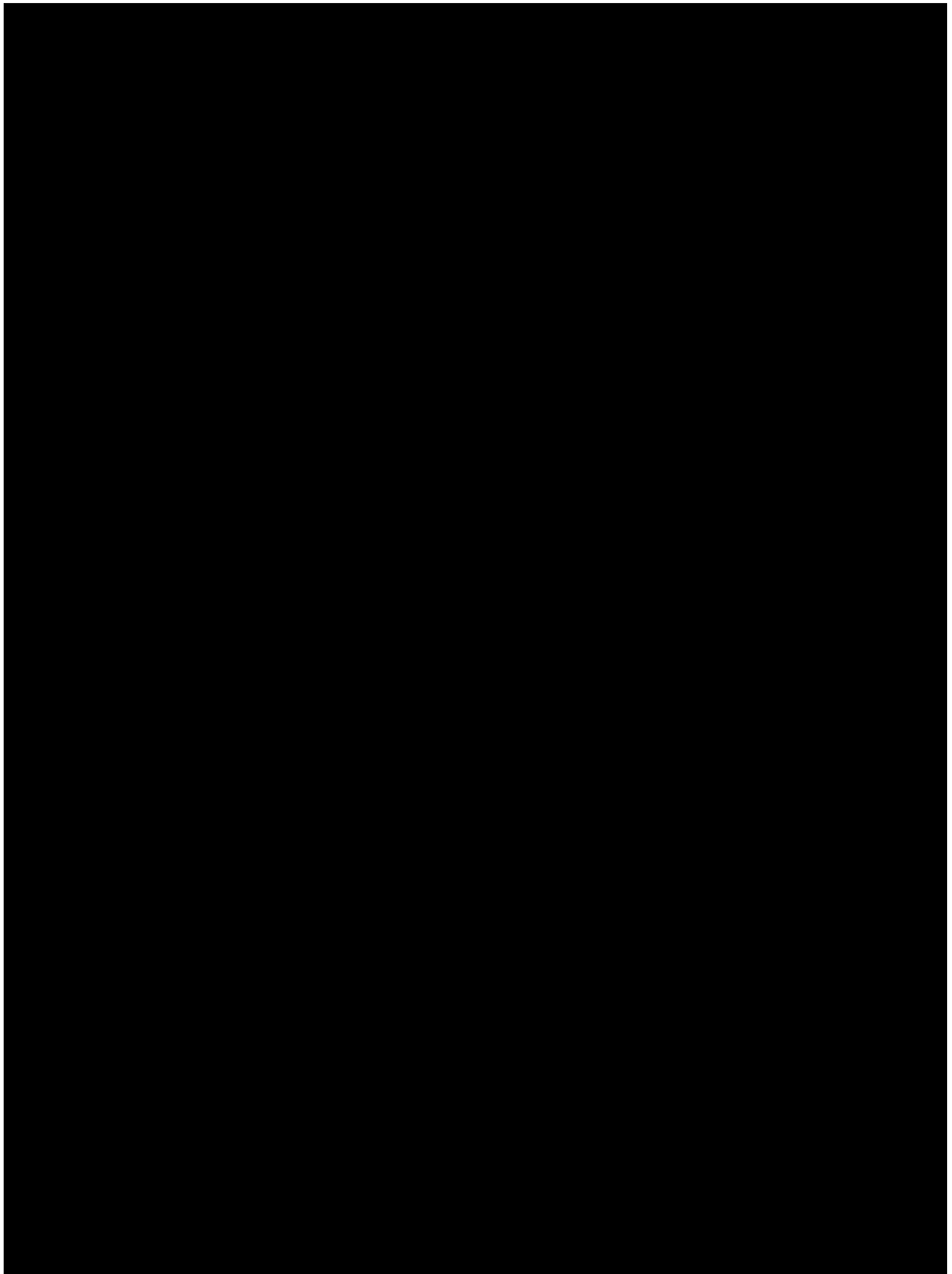
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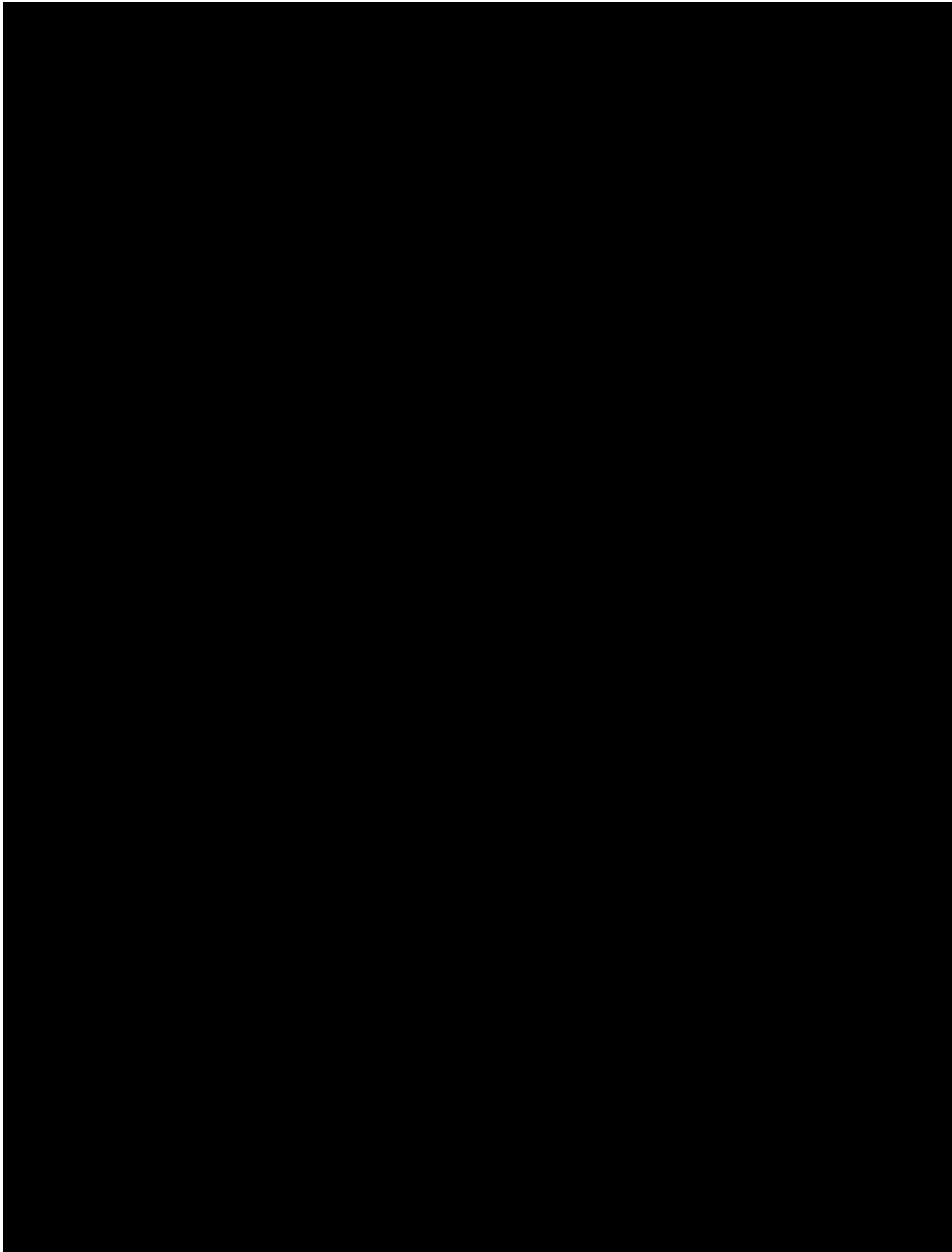
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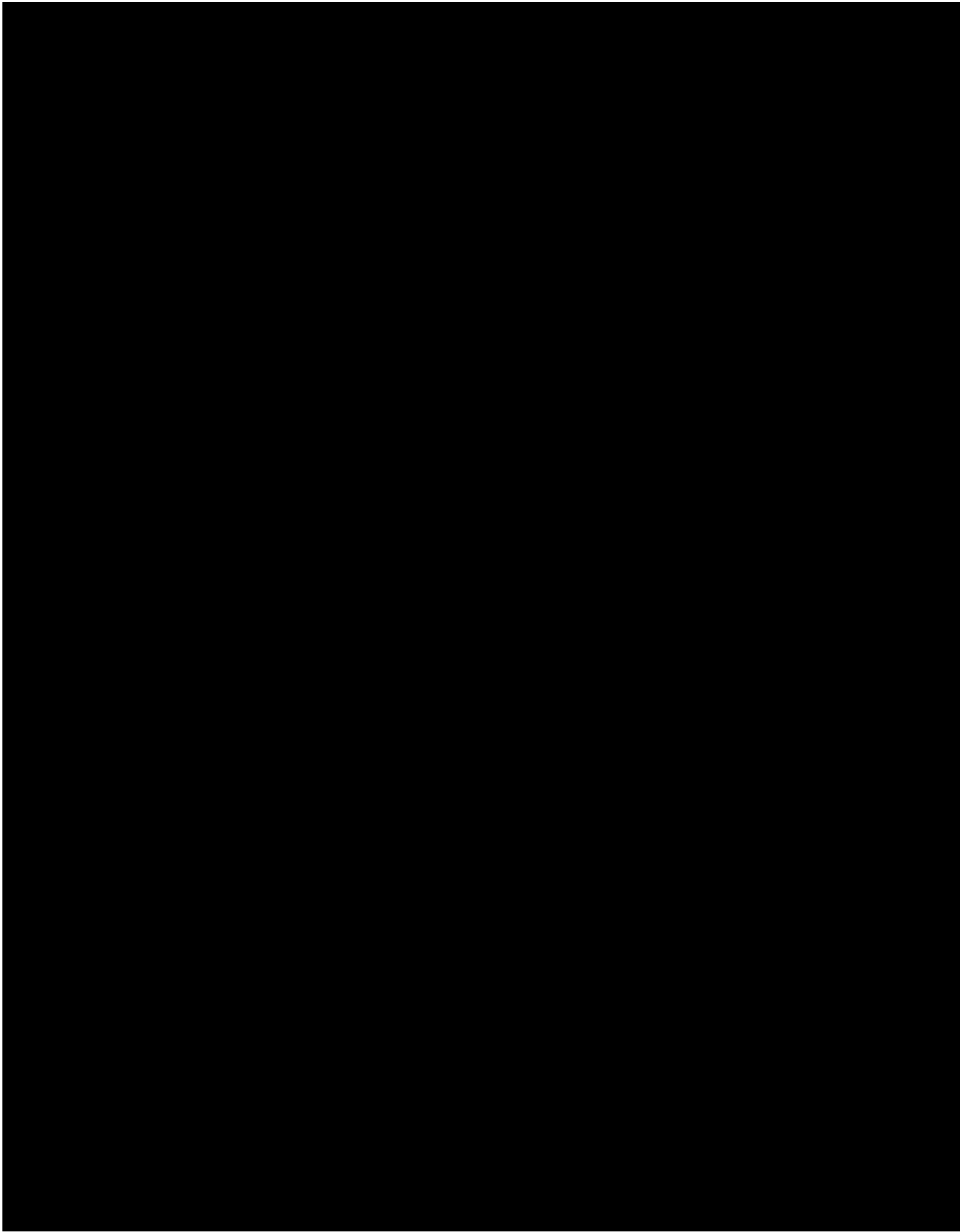
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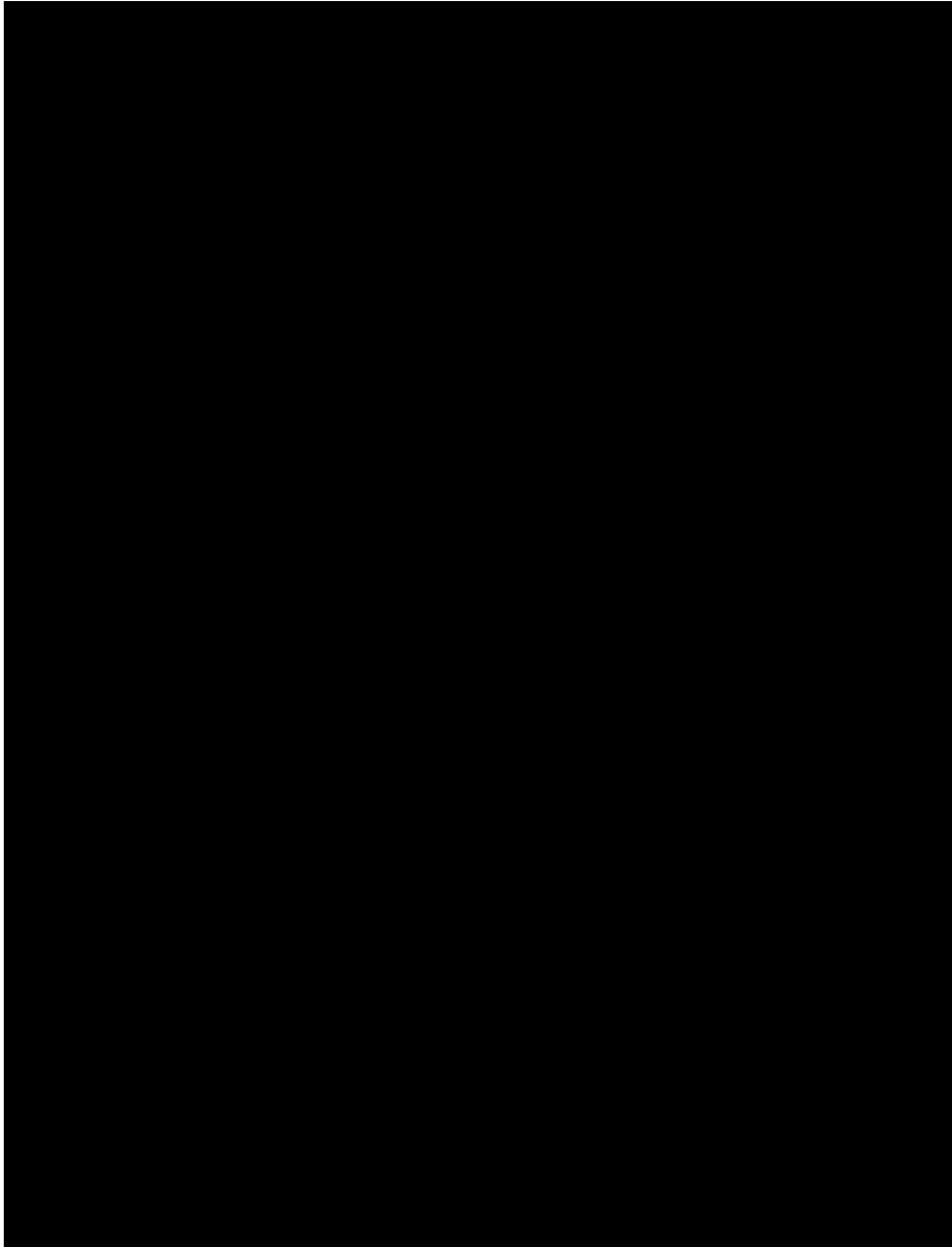
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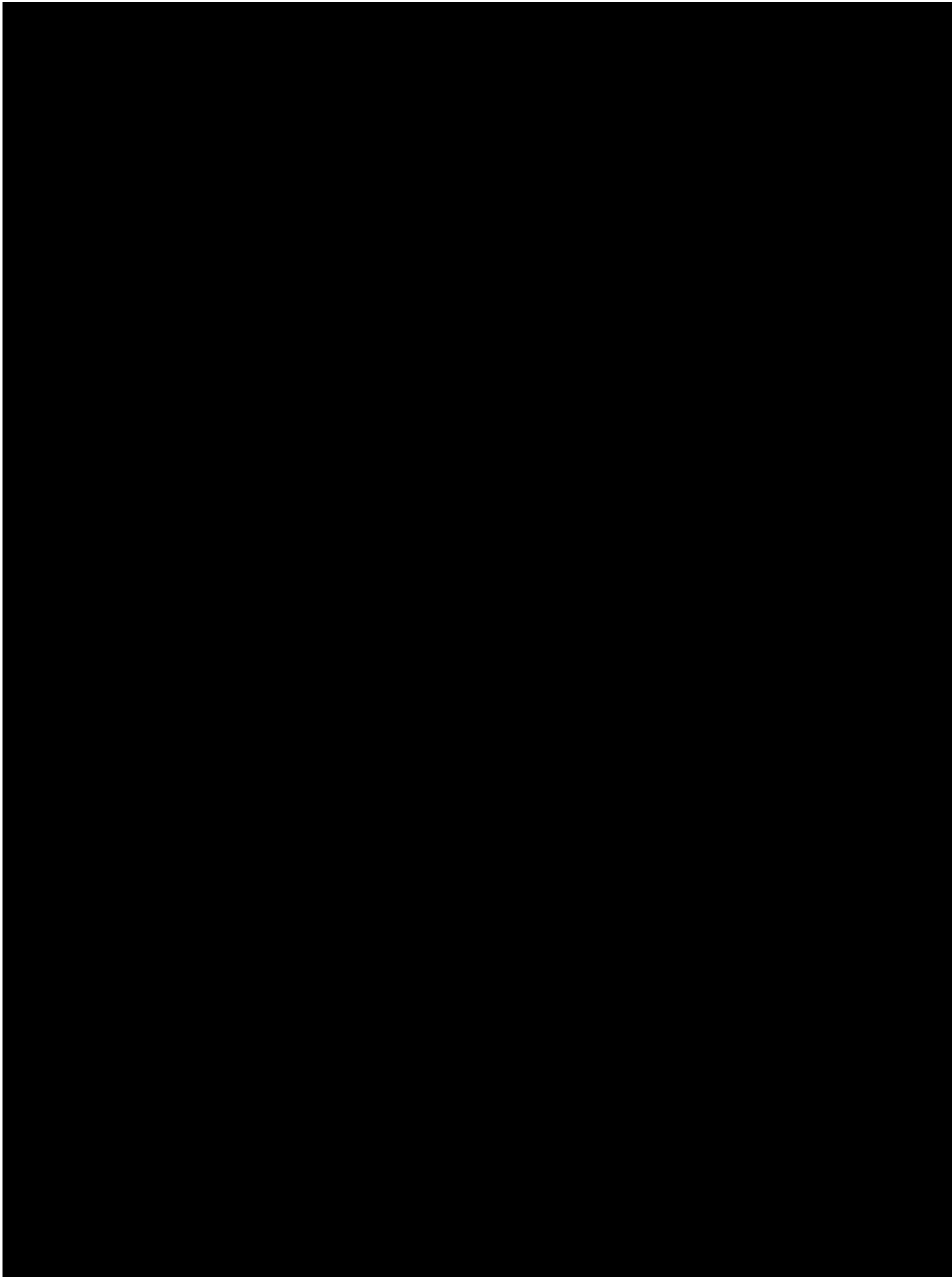
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the 1990s, the number of people in the UK who are employed in the public sector has increased by 1.5 million (from 2.5 million in 1980 to 4 million in 1998) and the number of people in the public sector who are employed in the health sector has increased by 1.2 million (from 1.3 million in 1980 to 2.5 million in 1998) (Department of Health 1999).

There is a growing emphasis on the need to improve the quality of care provided by the public sector. This has led to a number of initiatives, including the introduction of the Health Care Act 1999, which sets out a framework for the regulation of health care providers. The Act also sets out a number of objectives for the health care system, including the need to improve the quality of care, to ensure that care is safe, effective, and efficient, and to ensure that care is accessible to all.

One of the key challenges facing the health care system is the need to improve the quality of care. This is a complex task, as it involves a number of factors, including the quality of the staff, the quality of the facilities, and the quality of the care itself. There are a number of initiatives that are being implemented to improve the quality of care, including the introduction of the Health Care Act 1999, the introduction of the Health Care Act 2001, and the introduction of the Health Care Act 2003.

The Health Care Act 1999 sets out a framework for the regulation of health care providers. It sets out a number of objectives for the health care system, including the need to improve the quality of care, to ensure that care is safe, effective, and efficient, and to ensure that care is accessible to all. The Act also sets out a number of powers for the regulator, including the power to issue licences, to set standards, and to enforce the standards.

The Health Care Act 2001 sets out a number of powers for the regulator, including the power to issue licences, to set standards, and to enforce the standards. The Act also sets out a number of objectives for the health care system, including the need to improve the quality of care, to ensure that care is safe, effective, and efficient, and to ensure that care is accessible to all.

The Health Care Act 2003 sets out a number of powers for the regulator, including the power to issue licences, to set standards, and to enforce the standards. The Act also sets out a number of objectives for the health care system, including the need to improve the quality of care, to ensure that care is safe, effective, and efficient, and to ensure that care is accessible to all.

There are a number of initiatives that are being implemented to improve the quality of care, including the introduction of the Health Care Act 1999, the introduction of the Health Care Act 2001, and the introduction of the Health Care Act 2003. These initiatives are aimed at improving the quality of care, to ensure that care is safe, effective, and efficient, and to ensure that care is accessible to all.

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The first part of the paper discusses the importance of the research and the objectives of the study. It highlights the need for a comprehensive understanding of the subject matter and the role of the researcher in this process. The second part of the paper presents the methodology used in the study, including the data collection methods and the analysis techniques. The third part of the paper discusses the results of the study and the conclusions drawn from the findings. The final part of the paper provides a summary of the key points and offers suggestions for future research.

The research was conducted in a systematic and rigorous manner, following the principles of scientific inquiry. The data was collected from a large sample of participants, ensuring the representativeness of the findings. The analysis was performed using advanced statistical techniques, allowing for a detailed examination of the data. The results of the study indicate that there is a significant relationship between the variables under investigation, supporting the hypotheses of the study.

The findings of this study have important implications for the field of research. They provide valuable insights into the underlying mechanisms and processes that govern the phenomenon being studied. These findings can be used to inform the development of new theories and models, as well as to guide the design of future research. The study also highlights the need for further research in this area, as there are still many unanswered questions and areas for exploration.

In conclusion, this study has made a significant contribution to the understanding of the subject matter. It has provided a comprehensive overview of the current state of knowledge and identified key areas for future research. The findings of the study are robust and reliable, and they have important implications for the field. The study also demonstrates the value of a systematic and rigorous approach to research, and it serves as a model for future studies in this area.

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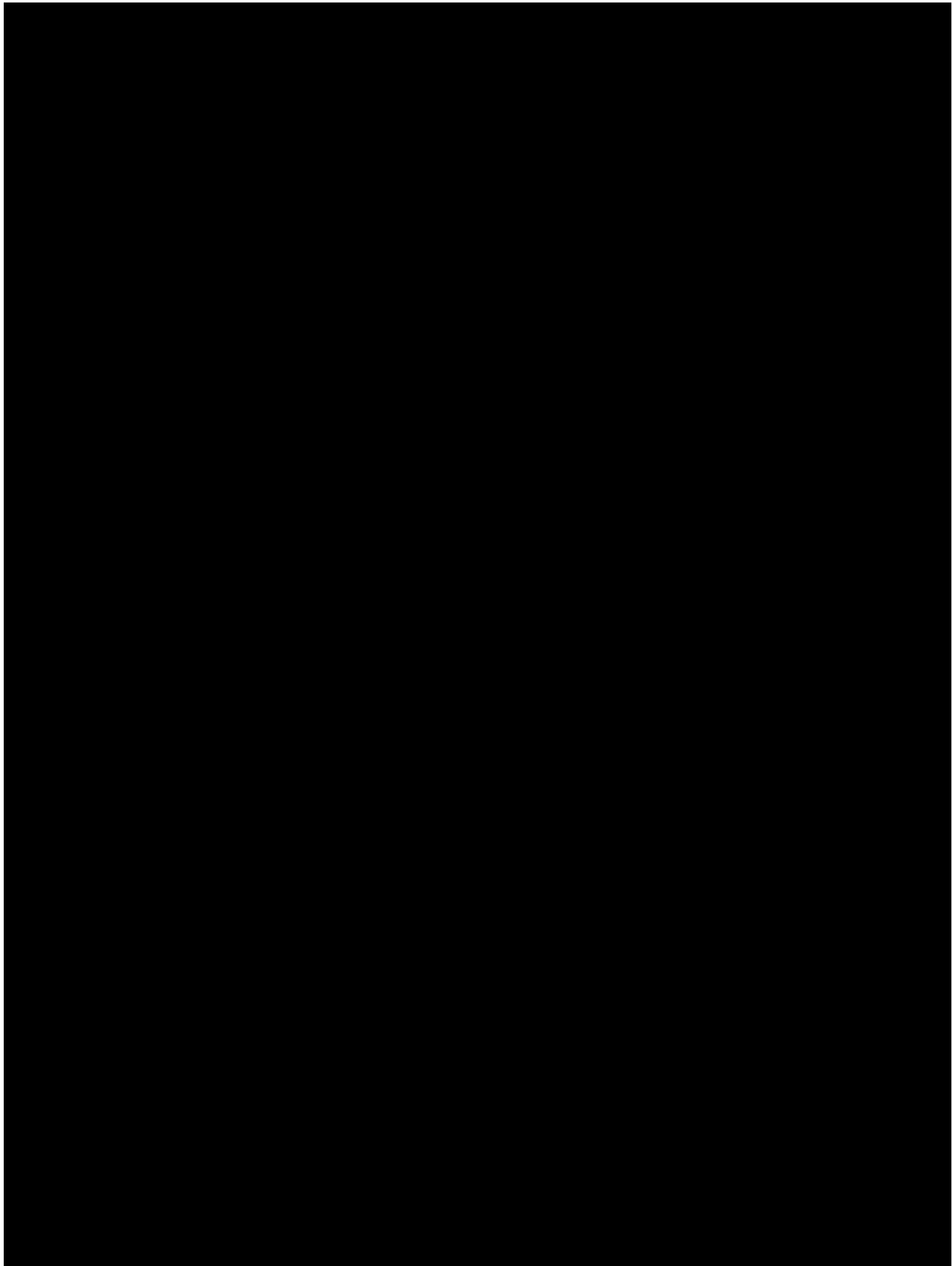
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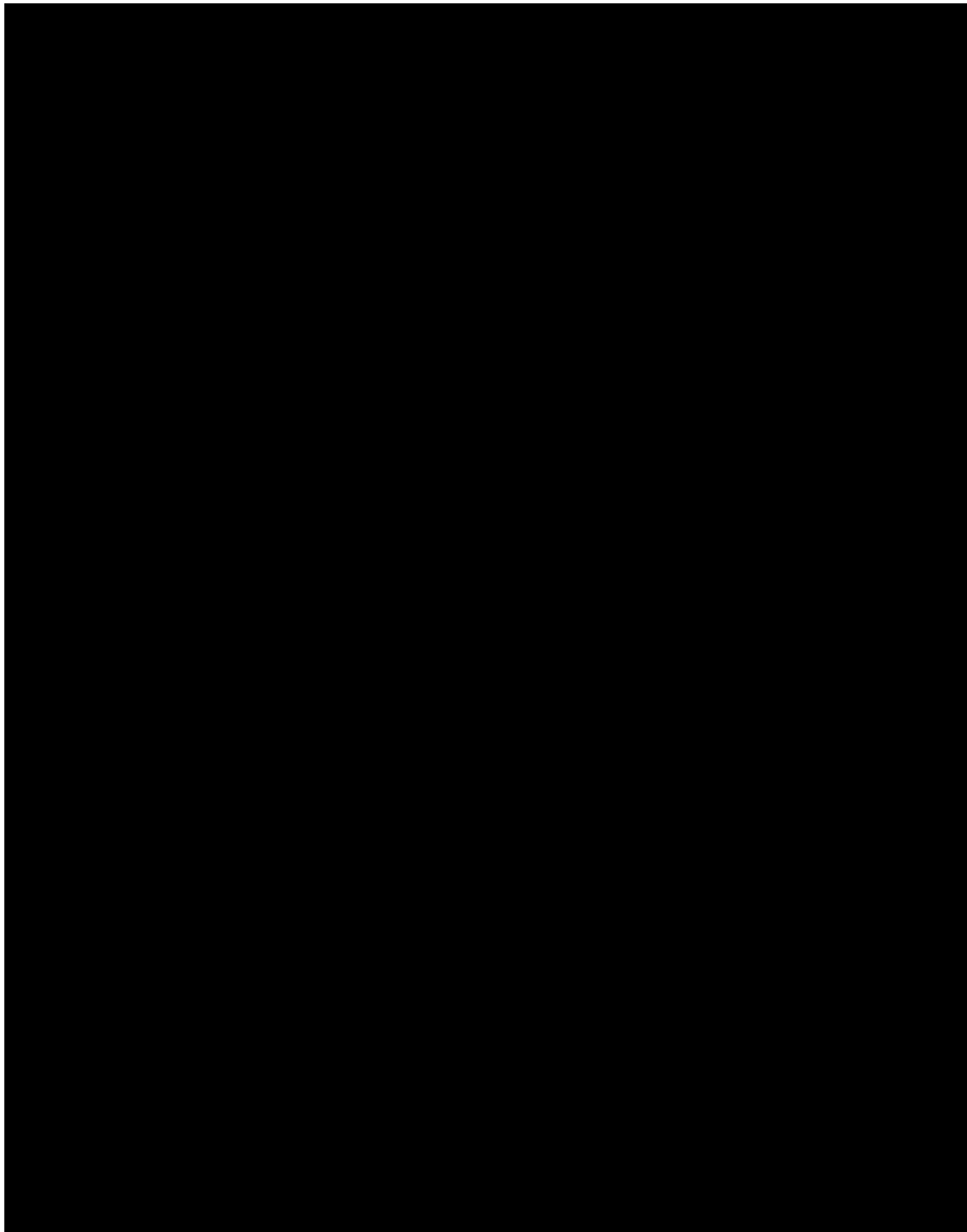
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The study was conducted using a quantitative research design. Data was collected from a sample of 100 participants using a survey questionnaire. The data was then analyzed using statistical software to identify patterns and trends. The results of the study indicate that there is a significant relationship between the variables being studied.

The findings of the study have several implications for practice and policy. First, the results suggest that the current approach to the issue may need to be revised. Second, the study highlights the need for further research in this area. Finally, the findings provide valuable insights for stakeholders involved in the issue.

In conclusion, the study has provided a comprehensive analysis of the topic. The results of the study are consistent with the hypotheses and provide a clear understanding of the relationship between the variables. The study also highlights the need for further research and the importance of the findings for practice and policy.

The first of these is the fact that the system is not a simple one. It is a complex system, and as such, it is not possible to understand it by looking at its parts in isolation. The system is a whole, and its behavior is determined by the interactions between its parts. This is a fundamental principle of systems thinking, and it is one that is often overlooked in traditional approaches to problem-solving.

The second of these is the fact that the system is dynamic. It is not a static system, and its behavior changes over time. This is another fundamental principle of systems thinking, and it is one that is often overlooked in traditional approaches to problem-solving.

The third of these is the fact that the system is interconnected. The parts of the system are not isolated from one another, and they all have an impact on the behavior of the system as a whole. This is another fundamental principle of systems thinking, and it is one that is often overlooked in traditional approaches to problem-solving.

The fourth of these is the fact that the system is self-organizing. The parts of the system are able to interact with one another in a way that allows the system to adapt to changes in its environment. This is another fundamental principle of systems thinking, and it is one that is often overlooked in traditional approaches to problem-solving.

The fifth of these is the fact that the system is resilient. It is able to withstand shocks and stresses, and it is able to recover from them. This is another fundamental principle of systems thinking, and it is one that is often overlooked in traditional approaches to problem-solving.

The sixth of these is the fact that the system is sustainable. It is able to continue to exist and function over a long period of time. This is another fundamental principle of systems thinking, and it is one that is often overlooked in traditional approaches to problem-solving.

The seventh of these is the fact that the system is equitable. It is able to provide benefits to all of its members, and it is able to do so in a way that is fair and just. This is another fundamental principle of systems thinking, and it is one that is often overlooked in traditional approaches to problem-solving.

The eighth of these is the fact that the system is transparent. Its behavior is understandable, and its decisions are explainable. This is another fundamental principle of systems thinking, and it is one that is often overlooked in traditional approaches to problem-solving.

The ninth of these is the fact that the system is accountable. It is able to take responsibility for its actions, and it is able to do so in a way that is honest and open. This is another fundamental principle of systems thinking, and it is one that is often overlooked in traditional approaches to problem-solving.

The tenth of these is the fact that the system is inclusive. It is able to include all of its members, and it is able to do so in a way that is respectful and considerate. This is another fundamental principle of systems thinking, and it is one that is often overlooked in traditional approaches to problem-solving.

The first part of the paper discusses the importance of the research and the objectives of the study. It then presents a literature review of the existing research on the topic. The second part of the paper describes the methodology used in the study, including the data collection and analysis techniques. The third part of the paper presents the results of the study, and the fourth part discusses the conclusions and implications of the findings.

The study was conducted using a quantitative research design. Data was collected from a sample of 100 participants using a questionnaire. The questionnaire was designed to measure the variables of interest in the study. The data was then analyzed using statistical software to determine the relationships between the variables.

The results of the study show that there is a significant positive relationship between the variables. This finding is consistent with the previous research on the topic. The study also found that there are some differences in the results between the different groups of participants.

The conclusions of the study suggest that the findings have important implications for practice. The results indicate that the variables studied are important factors in the process being investigated. The study also suggests that further research is needed to explore the relationships between the variables in more detail.



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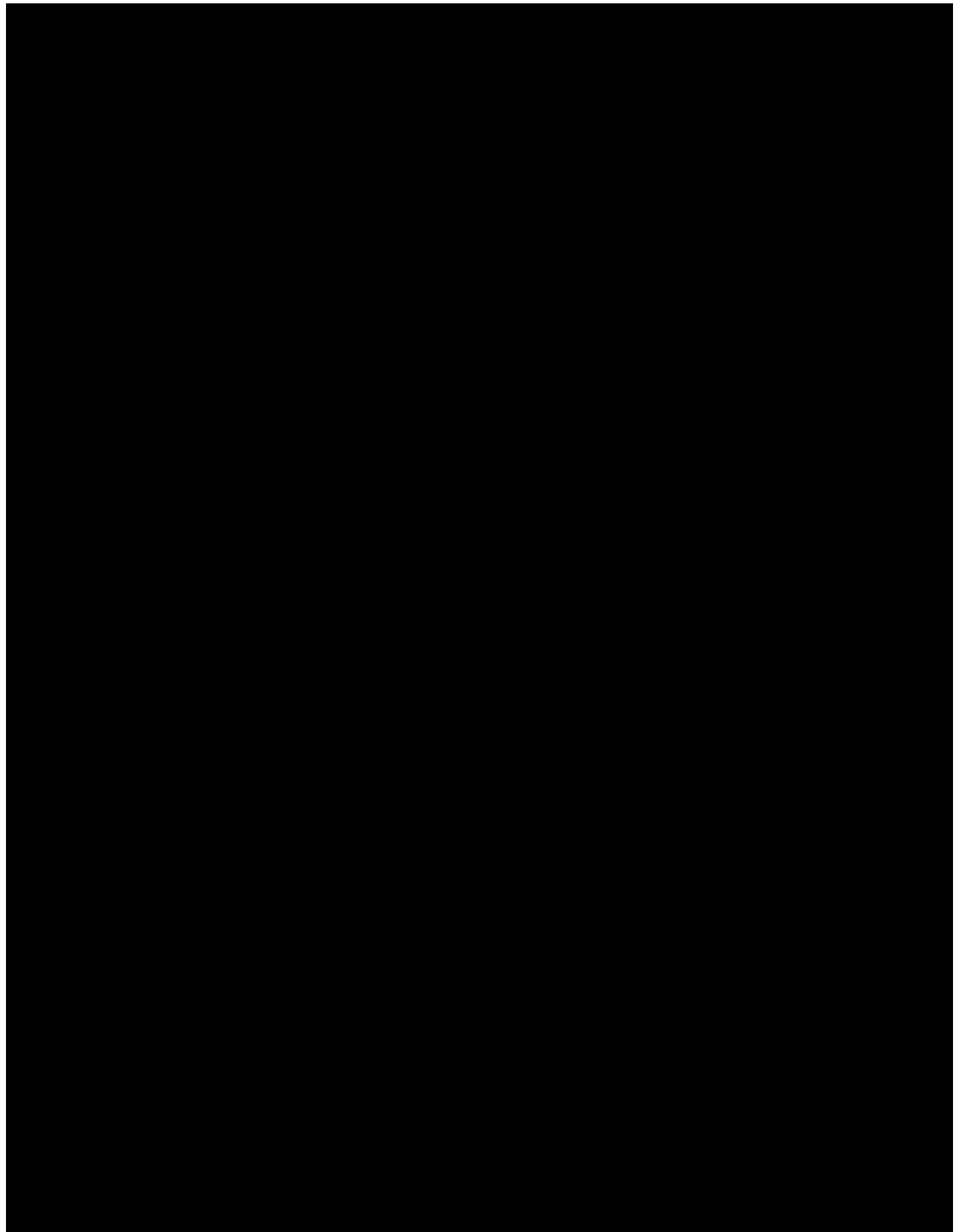
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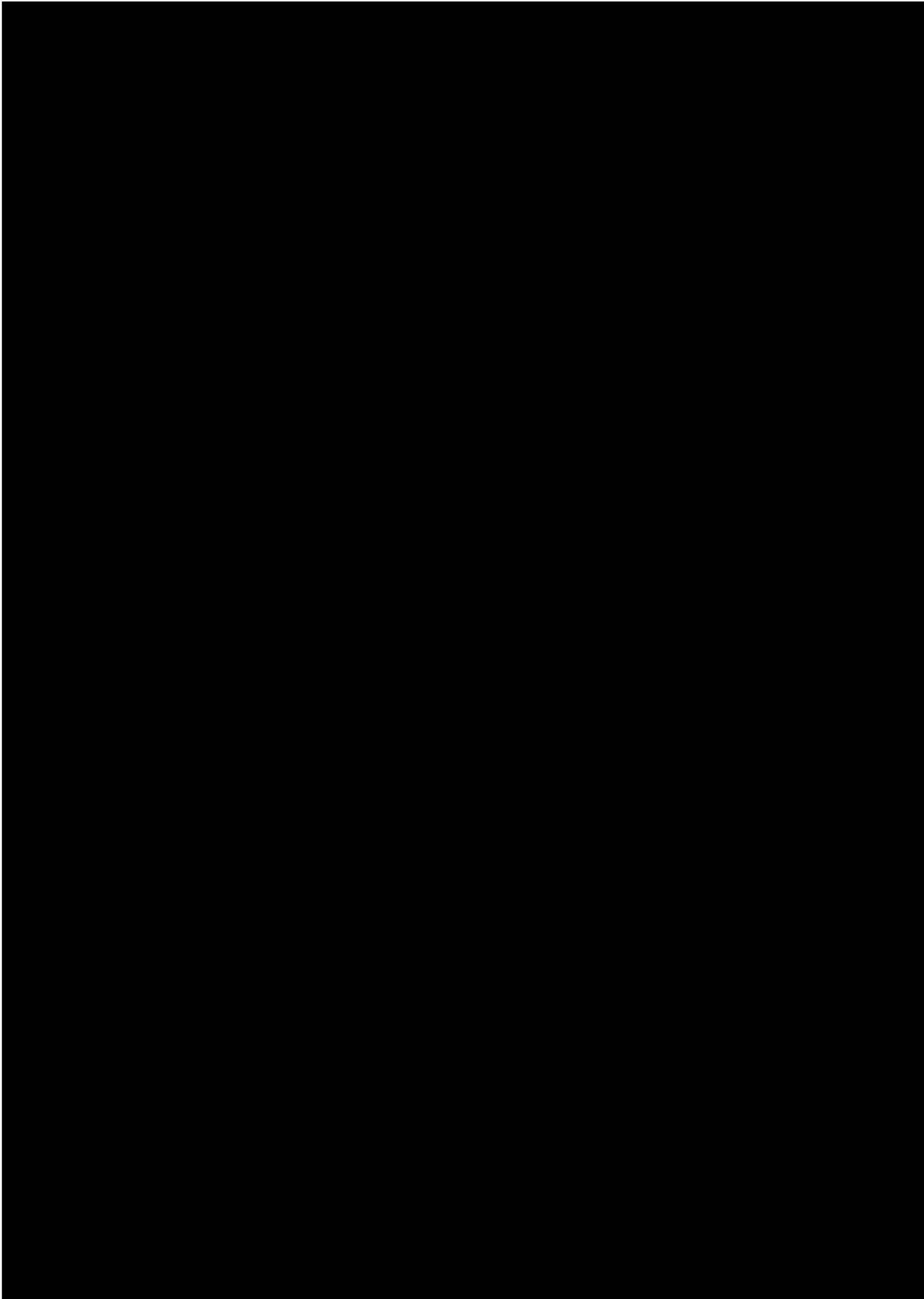
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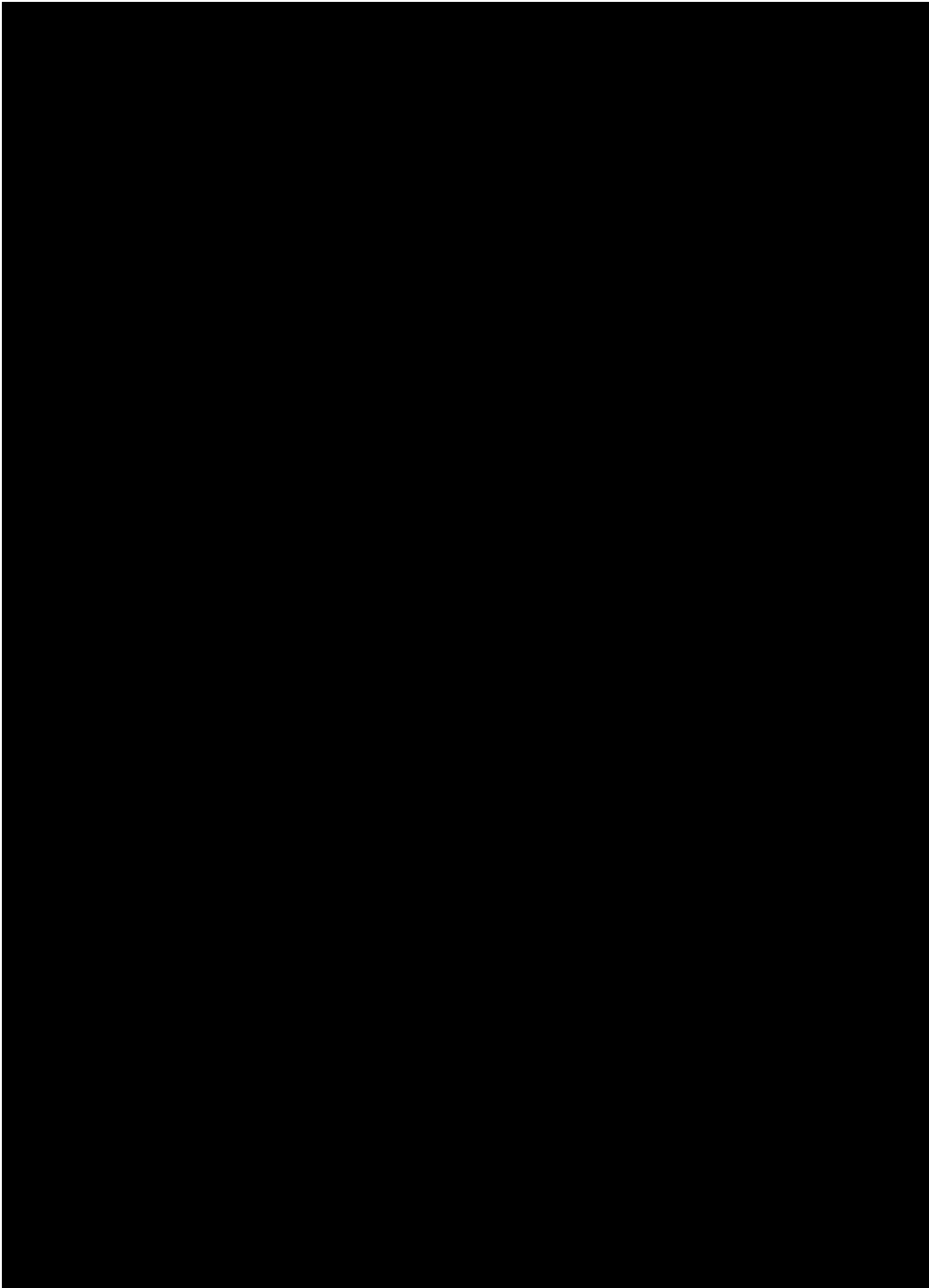


The first part of the paper discusses the importance of the research and the objectives of the study. It then moves on to a literature review, which provides a background on the topic and identifies the gaps in the existing research. The methodology section describes the research design, data collection, and analysis. The results section presents the findings of the study, and the conclusion summarizes the main points and offers suggestions for future research.

The research was conducted in a systematic and rigorous manner, following the principles of good research practice. The data was collected from a representative sample of the population, and the analysis was carried out using appropriate statistical methods. The results of the study are presented in a clear and concise manner, and the conclusions are based on the evidence gathered.

The findings of the study have important implications for the field of research, and they provide valuable insights into the issues being studied. The research also highlights the need for further investigation in this area, and it offers suggestions for how this can be achieved.

In conclusion, the research has shown that there is a need for further investigation in this area, and it has provided valuable insights into the issues being studied. The findings of the study have important implications for the field of research, and they offer suggestions for how this can be achieved.



The first part of the paper discusses the importance of the research and the objectives of the study. It then presents a literature review of the existing research on the topic. The second part of the paper describes the methodology used in the study, including the data collection and analysis techniques. The third part of the paper presents the results of the study, and the fourth part discusses the conclusions and implications of the findings. The paper concludes with a summary of the main points and a list of references.

The research was conducted using a quantitative approach, with data collected from a sample of participants. The data was then analyzed using statistical methods to identify patterns and trends. The results of the study indicate that there is a significant relationship between the variables being studied. The findings have important implications for the field of research and for future studies.

The study was limited by several factors, including the sample size and the scope of the research. However, the results provide valuable insights into the topic and suggest areas for further investigation. The authors hope that this research will contribute to the understanding of the phenomenon being studied and that it will be useful to other researchers in the field.

the 1990s, the number of people in the world who are under 15 years of age has increased by 1.2 billion, from 1.1 billion in 1980 to 2.3 billion in 1999. The number of people aged 15 years and over has increased by 1.1 billion, from 1.1 billion in 1980 to 2.2 billion in 1999.

There are a number of reasons why the world population is growing so rapidly. One of the main reasons is that the number of children born to each woman has increased. In 1980, the average woman in the world had 2.5 children. In 1999, the average woman in the world had 2.7 children.

Another reason why the world population is growing so rapidly is that the number of people who are living longer is increasing. In 1980, the average person in the world lived for 67 years. In 1999, the average person in the world lived for 72 years.

There are a number of other reasons why the world population is growing so rapidly. One of the main reasons is that the number of people who are living in cities is increasing. In 1980, there were 1.1 billion people living in cities. In 1999, there were 2.3 billion people living in cities.

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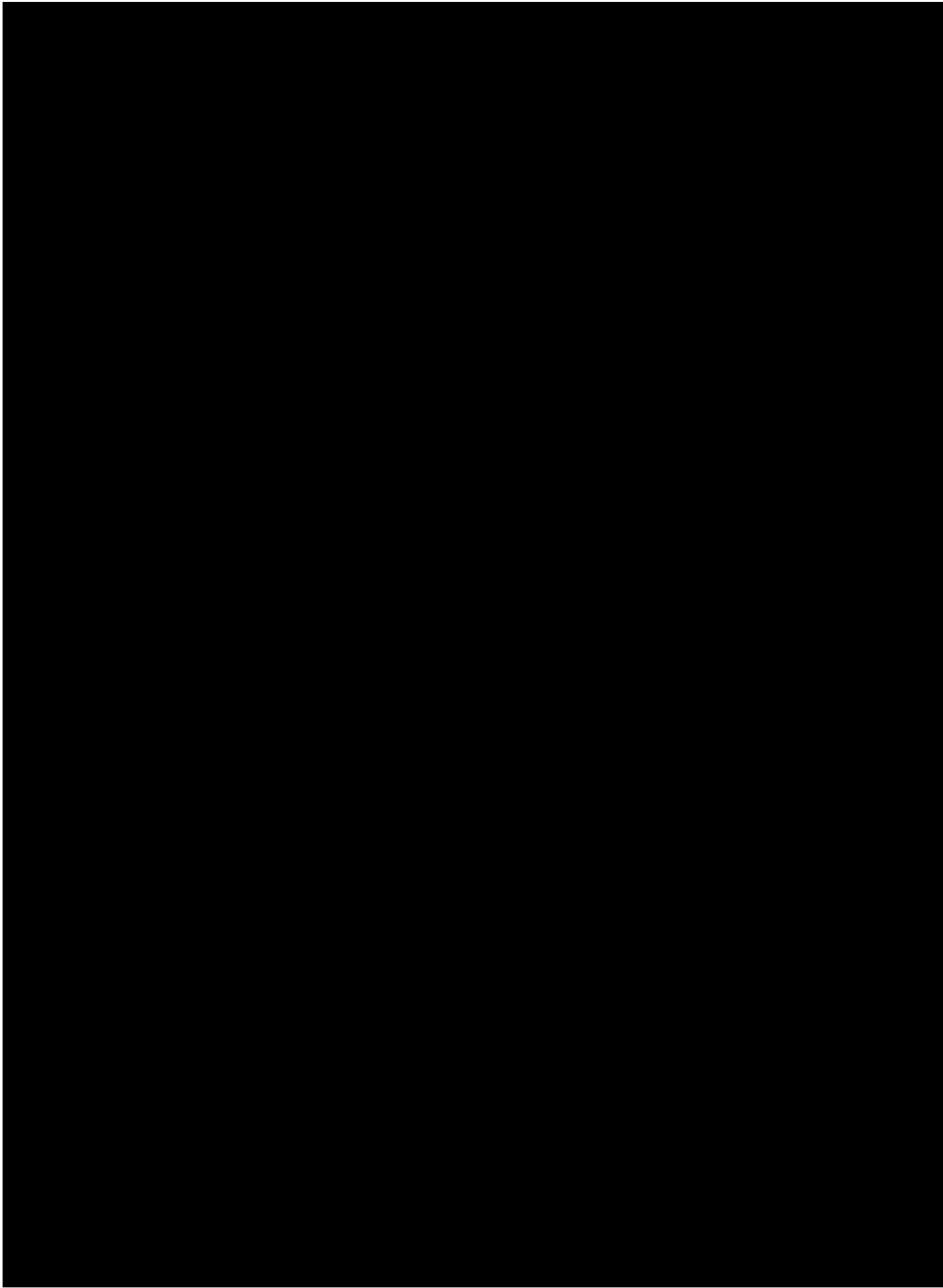
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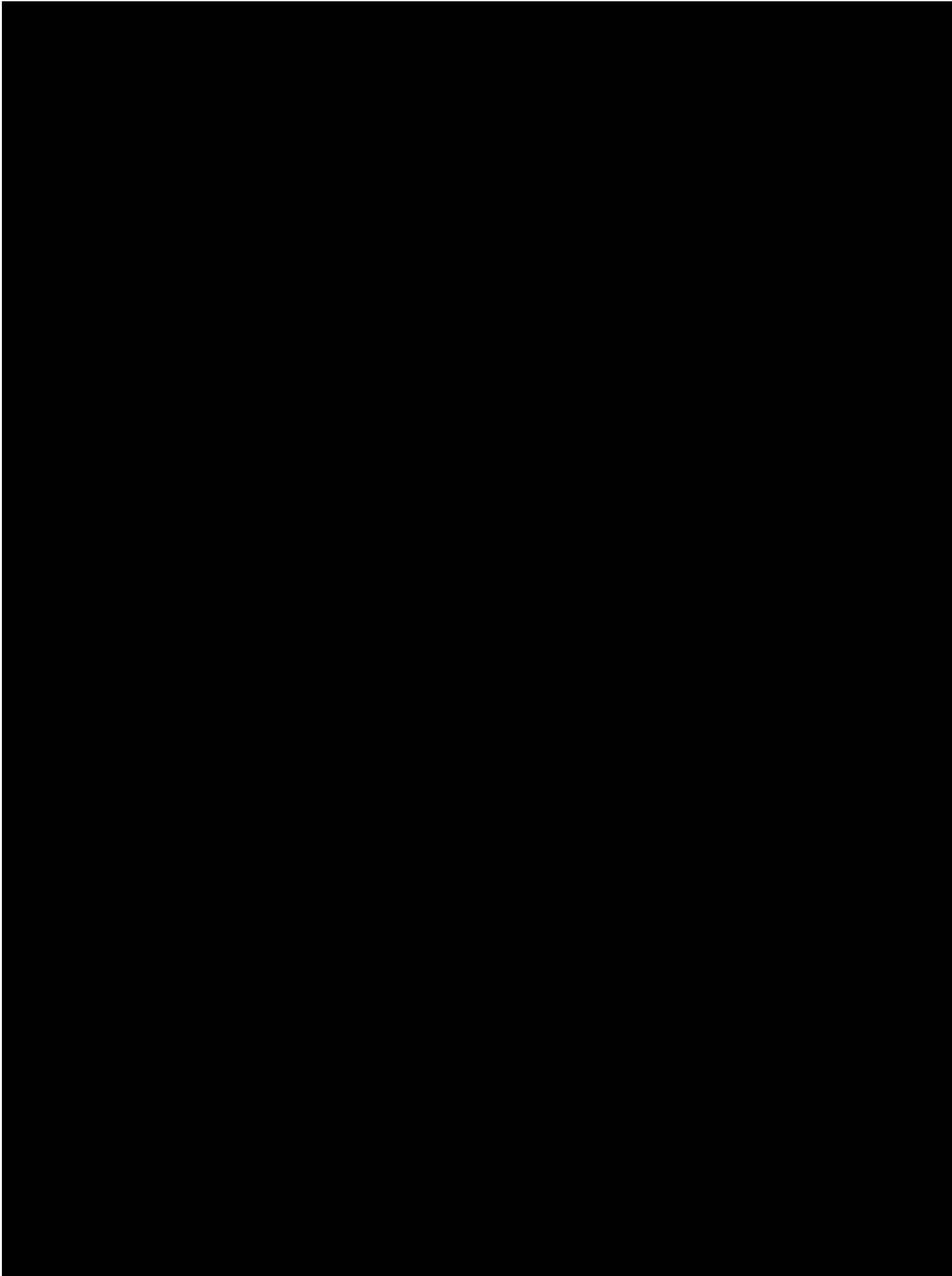
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The first part of the paper discusses the importance of the research and the objectives of the study. It then presents a literature review of the existing research on the topic. The second part of the paper describes the methodology used in the study, including the data collection and analysis techniques. The third part of the paper presents the results of the study and discusses the implications of the findings. The final part of the paper concludes the study and provides recommendations for future research.

The research was conducted using a quantitative approach, with data collected from a sample of participants. The data was then analyzed using statistical methods to determine the significance of the findings. The results of the study indicate that there is a significant relationship between the variables being studied.

The findings of the study have important implications for the field of research. They suggest that the variables being studied are closely related and that the research has the potential to contribute to the understanding of the topic.

In conclusion, the study has shown that the variables being studied are significantly related. The findings have important implications for the field of research and suggest that further research is needed to explore the relationship between the variables.

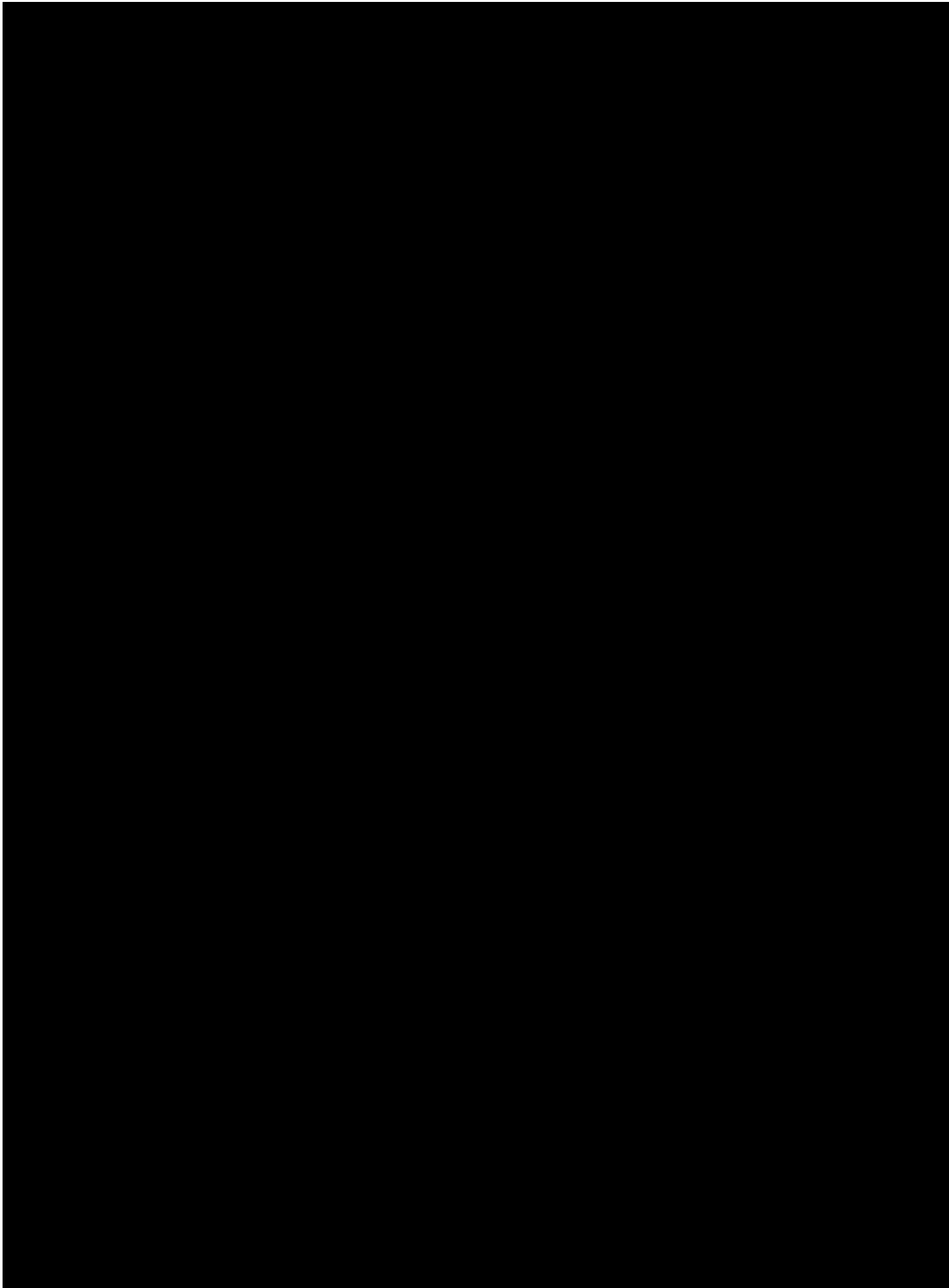
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The study was conducted using a quantitative research design. Data was collected from a sample of 100 participants using a survey questionnaire. The data was then analyzed using statistical software to determine the relationships between the variables of interest.

The results of the study indicate that there is a significant positive relationship between the variables of interest. This finding is consistent with the hypotheses of the study and contributes to the understanding of the phenomenon being investigated.

The implications of the findings suggest that there are practical applications for the research. These implications can be used to inform policy and practice in the field of study.

In conclusion, the study has provided valuable insights into the relationship between the variables of interest. Further research is needed to explore the topic in more depth and to validate the findings of the study.



the 1990s, the number of people in the UK who are aged 65 and over has increased by 1.5 million, and the number of people aged 75 and over has increased by 1 million (Office for National Statistics 1999). The number of people aged 65 and over is projected to increase to 6.5 million by 2011, and the number of people aged 75 and over to 3.5 million (Office for National Statistics 1999).

There is a growing awareness of the need to address the needs of older people, and a number of initiatives have been launched to improve the lives of older people. The Department of Health has launched the 'Age Friendly' initiative, which aims to make the UK a more age-friendly country. The initiative is based on the principle that older people should be able to live independently, safely and comfortably, and that they should be able to participate in the community. The initiative is based on the following principles:

- Older people should be able to live independently, safely and comfortably.
- Older people should be able to participate in the community.
- Older people should be able to access the services they need.
- Older people should be able to live in a safe and secure environment.
- Older people should be able to live in a community that is friendly to them.

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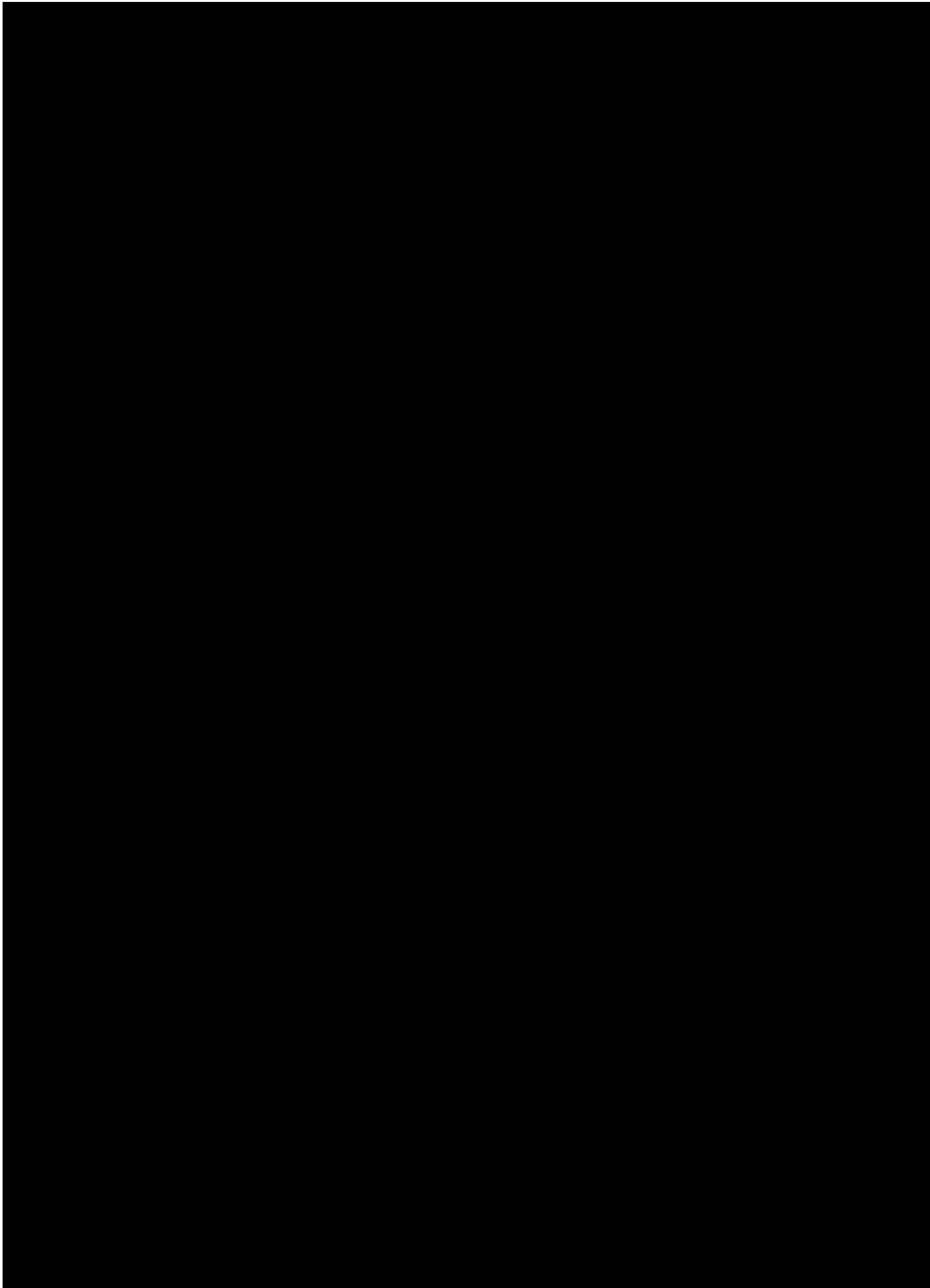
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I: Community Engagement Program

SCS ENGINEERS

COMMUNITY ENGAGEMENT PROGRAM

SCOPE OF WORK

The below scope of work will focus on commercial and residential food and organics waste diversion programs for the SCWMA service area. Organics diversion programs and commercial technical assistance will complement education efforts as outlined in each city's franchise agreement with their hauler. Renewable Sonoma's efforts will expand commercial and residential participation to increase organics diversion tonnages, improve participation, and minimize contamination. Our food and organics recycling assistance team will be led by Leslie Lukacs who has local experience and knowledge of the collection practices, material separation and transportation challenges and collection logistics in Sonoma County. Efforts to improve the organics material stream to make premium compost will support carbon farming efforts, climate initiatives, and legislative compliance. SCS foresees close collaboration with SCWMA and franchised haulers. The following information outlines the tasks that will be taken to improve the quality of the organics stream.

Renewable Sonoma Load Checking Program

Performing a visual characterization for the entire organics load of each route will be useful in identifying routes and days that have larger volumes of organics and contamination. This information will be used to target geographic areas and customers that would benefit from additional technical assistance providing focus and direction for maximizing diversion opportunities. Renewable Sonoma will implement a load-checking program utilizing a spotter to detect and discourage attempts to dispose contaminants in the organics stream. A spotter is person whose job it is to inspect incoming organics and to identify and properly manage any unauthorized contaminants received at the facility. Load checking starts at the gate where the staff perform an initial screening. A camera will be in place to look into the body of the truck. The load-checking program shall consist of the following minimum requirements:

1. A spotter will examine organics material streams received at Renewable Sonoma daily. Loads selected by the spotter will be directed to discharge their loads at a designated location. A detailed inspection of the discharged organics will include the following:
 - a. Record the date and time of the inspection, name of the hauling firm and the vehicle license plate number;
 - b. Meet driver, confirm route number and location of origin;
 - c. Perform visual characterization and record estimated percentage of the load corresponding to each material type identified;
 - d. Take pictures of loads when visual contamination exceeds 5% for glass, metal, rock, etc, and 20% for plastic, cardboard, coated paper, etc.;
 - e. Receive a copy of the weight tags for each load observed;
 - f. Reconcile percentages to the weight of the entire load.
2. If contamination is found, Renewable Sonoma will contact the generator (if identified), hauler, or other party responsible for shipping contaminants to Renewable Sonoma to determine the identity of the waste sources.



3. Information and observations resulting from each random inspection will be recorded in writing and retained by Renewable Sonoma for at least five years. The written record shall be signed by the inspector.
4. Renewable Sonoma will make arrangements for temporary storage, handling and transport to an authorized disposal facility for unauthorized waste which is inadvertently accepted at the facility. Contaminant waste to organics not be stored for longer than 30 days.
5. Renewable Sonoma will have trained spotters examining the organics loads. Spotters will be properly trained to identify and manage any unauthorized contaminants received at Renewable Sonoma. A training plan, along with records documenting how the training plan is being implemented, will be kept at Renewable Sonoma.

All data collected will be reviewed with and recommendations made on potential route and/or businesses that will be targeted for additional organics technical assistance.

Commercial Visual Characterization

SCS will perform ongoing site visits of commercial locations and routes with high contamination as identified by the Renewable Sonoma spotters. The visit includes a visual characterization of the contents in the organics bin and characterization of organics in the waste and recycling bin. Information gathered from the visit will be summarized in the spreadsheet, detailing types and percentages of organics, and other relevant information, including identification of the potential need for an increase in organics bins and/or service frequency.

SCS will request a list of commercial service locations by route from the haulers. SCS staff will review the list and make sure all of the information needed is available. Once the list has been established, the service locations will be organized by geographic location in order to make the visits as efficient as possible.

SCS Field Staff will:

- Visit businesses the day before organics service.
- Verify organics bin size and level of fullness.
- Observe organics contents of each commercial bin and estimate composition by volume of each material type selected.
- Observe contents of each commercial organics bin and estimate fullness level, note percentage of contamination, confirm days of service if possible, evaluate if right-sizing of container is needed.
- Identify additional customer organics service needs and any other special features that may be a priority.

To estimate the organics composition, staff will consider each material type separately and estimate the percentage of each material type that makes up the total volume of organics visible in the container (opening bags if necessary). The material categories may include:

- Single Stream Recyclables (bottles, cans, #1-#7 plastics, mixed paper, cardboard)
- Other recoverable materials, such as plastic shrink wrap, rigid plastics, pallets, construction and demolition material (i.e. wood, scrap metal, dry wall), and any additional materials present in significant volumes, with notes and photos of specific material types.
- Food Scraps
- Compostable paper (napkins and other food contaminated paper)
- Plant trimmings (green materials)
- Waste (non-recyclable dry wet? materials)

Data Analysis and Recommendations

Upon completion of field characterizations for each route, SCS staff will input the information from the visual characterizations into a spreadsheet which will tabulate the details, such as:

- Summaries of total yards of organic material types as noted above by: (1) percentages by bin for each customer, (2) route by day
- Identification of businesses that require additional organic service and/or further education to maximize recycling diversion from trash container.
- Identify businesses/routes that need increased education/outreach to minimize contaminants

After the characterization spreadsheet is finalized, the SCS will determine which businesses are the highest priority to visit for organics diversion opportunities and quality improvement. SCS will provide a summary sheet and the complete database contents to identify overall characterization findings and to be used for future exploration of routing, training and diversion opportunities which can be calculated differently depending on the program needs and individual customer material generation. The ultimate goals is to 1) to increase the organics from the trash container to the organics container; 2) to increase overall collection of organics; and 3) minimize contamination of the organics stream.

Target List

SCS will request customer data from the Sonoma County haulers who subscribe to organics collection service. SCS staff will select underperforming businesses as identified through the spotter program and commercial visual characterization program to provide organics and food recycling technical assistance. The list includes businesses currently participating in the separation of organics and businesses in need of additional organics assistance in order to increase the amount of organics and food waste separated and collected. Businesses identified as either under-performing or non-performing will receive additional technical assistance. Priority will be given to poor performing businesses that have the greatest potential to divert food/organic waste, to businesses with the highest volume of food/organic waste and the least likelihood of contamination, to businesses that are eager to improve their efforts, and to commercial areas where the density of food generating businesses is the greatest.

Business Organics and Food Waste Recycling Assistance

Using customer data provided by the haulers, SCS staff will contact businesses via phone to schedule an appointment, perform a site visit, confirm service levels, and provide necessary outreach and training to support a successful food waste recycling program. The SCS team is familiar with material specifications and will help educate the businesses and keep the food waste clean. The following subtasks discuss these actions in further detail.

Subtask: Preparation for Site Visit

SCS will inform the hauler of businesses in need of a site visit to provide technical assistance to improve organics collection. SCS will coordinate with the haulers to determine who will provide the technical assistance. SCS will review all available outreach materials, provide suggestions for additional material and confirm what will be distributed when meeting with a business. This task will also include preparation for field work as follows:

- Preparation of a letter explaining the purpose of our visits and legislative organic diversion requirements (i.e. AB 1826, AB 1383, etc.).
- Development of a spreadsheet to track all activity and data
- Development of a custom forms app for Team members to download to their mobile devices for completion when conducting site visits.

Subtask: Schedule Site Visit

SCS will call the participating businesses to schedule an appointment. Our primary objective will be to secure an appointment to meet in-person. SCS staff will contact the decision maker, explain the organics and food waste recycling program and service options, and schedule a site visit. For those businesses willing to meet, SCS will discuss service changes, program implementation, provide necessary outreach and trainings to support a successful and lasting food waste recycling program. One to three additional site visits will be required for underperforming businesses that require more support and assistance.

Following the telephone call, SCS staff will send an email to the business contact confirming the appointment, and provide food waste recycling program information.

SCS will attempt to contact each business two times via telephone. If no response is received, SCS will stop by the business one time, and try to meet with the decision maker and conduct a site visit. Any business unwilling to cooperate, including their reason, will be reported to SCWMA.

Subtask: Perform Site Visit

SCS will perform a site visit with key decision makers at the selected businesses. The following items will be discussed during the site visit:

- Current food recycling program and service level;
- Level of participation;
- Rate incentives;
- Proposed service changes to improve organics collection;
- Organics and food recycling program implementation process and status;
- Necessary steps to increase organics and food waste recycling program; and
- Concerns the business may have with diverting organics.

The site visit will consist of a walkthrough of the front-of-house waste collection, back-of-house waste collection, and outside food recycling bins, identify what interior bins to be purchased by the business and recommendation of their location. In many instances, it will be necessary to “right-size” discard service levels to facilitate increased food recycling. SCS team believes that it is important to reduce trash volumes not only to accommodate containers carts and bins, but also to establish a new paradigm at businesses, where mixed trash is no longer acceptable as a majority of what is generated and discarded.

A visual characterization will be performed to determine the level of organics and food entering the waste stream and the level of contamination in the organics recycling bin. Opportunities will be identified for infrastructure improvements, education needs, and participation efficiencies. If needed, SCS will propose service changes for approval by the business and confirm the service changes with the haulers from a service standpoint (i.e. container placement and enclosure access). Notification of next steps for implementation will be provided to the business, via email if possible. The site visit will include:

- Visual characterization of the food recycling bin and waste bin to check for contamination;
- Review collection container capacity;
- Site visit and walk-through to collect baseline waste assessment and material collection infrastructure information;
- Determine and record collection needs;
- Check staff knowledge of the program services and requirements;
- Customized food recycling collection recommendations;
- Follow-up implementation support as needed, including: training sessions, providing signage and collateral, referrals, and other activities;
- Provide multi-lingual outreach services when needed and feasible; and
- Notification of next steps for implementation.

Goals for assisting businesses include increasing organics and food waste diversion, educating accounts on organics recycling services, improving the participation of businesses, delivering exceptional customer service, working as efficiently as possible, and ensuring close

coordination with the haulers and SCWMA. SCS will track and report progress against goals on a monthly basis, including businesses assisted, accounts with changed service and other metrics as agreed to with SCWMA.

Implementation and Monitoring

SCS will work with the business to outline next steps to implement or enhance their organics and food waste recycling program. This may include training staff, providing outreach materials, and helping to purchase infrastructure. We will address potential obstacles with the businesses to ensure they are fully committed and feel adequately supported for a successful organics waste recycling program.

SCS will provide the following implementation services:

- Staff training in English and Spanish.
- Delivery of outreach materials, such as signage and decals.
- Assist identifying internal containers, side caddies, bags that may need to be purchased.
- Coordinate with the haulers to arrange service level changes and to update contact information.

Businesses will receive additional food/organics assistance and monitoring. These may include businesses where contaminants are excessive or collection is complex due to a business being located in a multi-tenant commercial complex. Our team understands the complexities and nuances of multi-tenant commercial complexes and will work with the haulers to accommodate transport and collection logistics. In addition, our recycling assistance team will engage with property managers to accommodate business participation and facilitate food waste recycling collection by the haulers. We will revisit these businesses to attempt to correct the problem with additional training, signage, and/or recommend changes to the customer's procedures.

SCS will provide a short follow-up site visit with all businesses a month after their organics and food waste recycling service has been modified or their program enhanced. The purpose of the follow-up visit will be to confirm delivery and use of recycling containers, assess if any additional outreach or training is needed, and to speak with the decision maker to see how the overall food waste recycling program is working for their business. Any red flags or immediate needs will be discussed with SCWMA and the haulers to define next steps.

Reporting and Project Management

SCS will provide brief monthly narrative and a spreadsheet that lists each business worked with, organics recycling assistance provided, service level changes, challenges and recommendations. Additionally, SCS will prepare an annual Memorandum, including

summaries and notations from the food recycling assistance and any other data that may be useful to inform SCWMA and the Board of Director of the process. In addition, SCS will provide the Memorandum to SCWMA to demonstrate compliance with AB 1826, AB 1383, and AB 876 requirements.

Staff

SCS will utilize a broad and talented group of contracted staff that focuses specifically on visual characterizations and commercial technical assistance. SCS will have two field workers trained for visual characterizations and available to work at any given time. SCS will utilize a separate crew for performing commercial technical assistance, which will include two additional public education experts.

J: Contaminant and Hazardous Waste management Protocols

CONTAMINANT AND HAZARDOUS WASTE MANAGEMENT PROTOCOLS

Contamination Characterization.

Renewable Sonoma anticipates that through education and outreach it will not exceed 5% contaminant in its organics stream and will aim for <3%. Contaminants include but are not limited to: glass, metal, plastic, compostable plastics, coated paper, cardboard, pressure treated wood, rock, stone, soil and hazardous waste. A visual inspection will be made of incoming loads. Paper and plastic are light and will be considered to be over 5% when a 20% visual cover is observed. Others will be considered excessively contaminated if > 5% visual contamination is observed. There will be zero tolerance for hazardous waste. This evaluation of contamination rates may be adjusted over time. Recyclable glass, paper, cardboard, metal, plastic will be separated and recycled. Residual is the remainder minus hazardous waste and will be properly disposed of at Central Site. Hazardous waste will be disposed of and reported in accordance of regulations. All personnel handling feedstock will be fully trained in contaminant and hazardous waste identification and handling.

Load checking and material handling

(a) Load checking. Renewable Sonoma will implement a load-checking program to detect and discourage attempts to dispose of unauthorized wastes at the compost site. The load-checking program shall consist of the following minimum requirements:

1. Renewable Sonoma shall examine at least one random load of compostables delivered to the compost site or transfer station each week. The organics collection vehicle driver selected by the inspector shall be directed to discharge their loads at a designated location within the processing building. A detailed inspection of the load shall be made for any unauthorized wastes.

2. If unauthorized wastes are found, the facility shall contact the generator, hauler, or other parties responsible for shipping the waste to the compost facility to determine the identity of the waste sources. SCS, who heads up the Community Engagement Program will also receive the findings to take appropriate actions as needed.

(b) Handling hazardous wastes.

1. If any regulated hazardous wastes are identified by random load checking, or are otherwise discovered to be improperly deposited at compost site, Renewable Sonoma will promptly notify the Department of Environmental Health, the Agency, the hauler responsible for shipping the wastes to the compost site, and the generator of the wastes, if identified. The area where the wastes are deposited shall immediately be cordoned off from public access. If the generator or hauler cannot be identified, Renewable Sonoma shall assure appropriate cleanup, transportation, and disposal of the waste at a permitted hazardous waste management facility.

2. Subsequent shipments from sources found or suspected to be previously responsible for shipping regulated hazardous waste shall be subject to precautionary measures prior to the compost facility accepting further organics.

(c) Recording inspection results. Information and observations resulting from each random inspection shall be recorded in writing on a special occurrences log and retained at the compost site for at least five years. The recorded information shall include, at a minimum: the date and time of the inspection; the names of the hauling firm and the driver of the vehicle; the vehicle license plate number; the route identification, the source of the

waste, as stated by the driver; and observations made by the inspector during the detailed inspection. The written record shall be signed by the inspector.

(d) Temporary storage. Renewable Sonoma shall make arrangements or shall have equipment for temporary storage, handling and transport to an authorized disposal or recycling facility for unauthorized waste which is inadvertently accepted by the facility.

Training

Renewable Sonoma will assure that operators and spotters are trained appropriately. Interim spotters may be employed, but only if they work under the direct supervision of a trained spotter or trained operator. Renewable Sonoma may employ an interim operator in lieu of a trained operator for no more than three consecutive months.

(a) Renewable Sonoma ensures that operators employed at the facility are properly trained to operate the facility, and that spotters are properly trained to identify and properly manage any unauthorized and non-compostable waste which is received at the facility. A training plan will be developed before operations will commence. Any in-house operator training program will be administered by a professional operator/instructor. In-house spotter training program will be administered by a trained operator/spotter/instructor. The training plan, along with records documenting how the training plan is being implemented, shall be kept at the facility at all times and be made available for inspection.

(b) In order to be considered trained, operators of Renewable Sonoma shall complete appropriate training requirements of training described in the facility's operating plan. Operators and spotters shall complete a minimum of 8 hours of initial training. Within three years after attending the initial training, and every three years thereafter, spotters shall complete an additional 4 hours of continued training.

(d) Spotter location.

If spotters are to be located near heavy equipment spreading the waste at the working face of the receiving area, the operation plan shall specifically provide for the following:

- a. The heavy equipment operator is trained as an operator,
- b. Spotters will be wearing appropriate gear, including safety vest and hard hat.
- c. The spotter will keep a 20' distance from any running piece of equipment. The operator of the equipment will not be approached until the equipment has been turned off.
- c. When a heavily contaminated load is discovered, the heavy equipment operator must move the unauthorized waste away from the active area for later removal and proper management and,
- c. In general, all loads of organics will be visually inspected for unauthorized waste prior to being further processed.

Fee Structure

Cost of disposing of all contaminants will be passed through to the SCWMA, including, but not limited to tipping fees, transportation, handling and administration. Contaminants include residuals and recyclables.

K: ECS Information on Composting Facility Design and Odor Control



Memo

engineered**COMPOST**systems

DATE:	11/8/17	ECS PROJ. NO.:	P2
BY:	Geoff Hill	PROJECT NAME:	Renewable Sonoma
TO:	Will Bakx	COPY TO:	Tim O'Neill
SUBJECT:	ECS Technology Review: focus on odor control and scrubbing		

RESPONSE REQUESTED

Yes		No	X	Hard Copy		E-Mail		Phone Call	
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Overview: Composting Facility Design & Odor

The Renewable Sonoma team has selected ECS as supplier of compost technology for their compost facility proposal to Sonoma County. ECS has 58 facilities operating around the world, each with a unique assemblage of compost technologies from the ECS Toolkit, chosen to address each client's unique set of needs. Combined, these facilities currently process over 1,250,000 tons of biosolids, food waste, yard waste, and municipal solid waste every year. Odor issues at these facilities are rare. ECS is proud of this industry track record especially in light of the documented odor issues that occur at enclosed or covered composting facilities including: [Hamilton, Ontario](#), [London, Ontario](#), [Seattle, Washington](#), and the closure in [Wilmington, Delaware](#). The first two covered facilities are tunnel type systems and the latter two are microporous fabric cover systems.

Nuisance odors are caused by not adequately optimizing the biological process conditions and can be largely avoided by:

1. Application of best management practices (BMPs) in operations (including compost mix characteristics).
2. The design of an aeration system capable of providing BMP process conditions:
 - a. even aeration distribution (low maldistribution)
 - b. high air supply rate (3-6 CFM/cubic yard of mix)

ECS president, Tim O'Neill authored two excellent articles on aeration fundamentals for a recent Biocycle publication that define our [BMP-based approach](#). The full paper can be provided if desired. In summary, sufficient air flow must be provided to control temperature and it must be distributed evenly to the pile. The air flow required to control temperature is much higher than that which is needed to deliver microbial oxygen. The ECS system controls temperatures below 60°C for the majority of the process, which reduces odors by orders of magnitude and causes the process to stay aerobic at the biofilm of the decomposing waste. This avoids the need for fabric covers or concrete enclosures, and significantly reduces odor production at each subsequent step of the process.

The body of work on odor prevention through process optimization is published [here](#) by the Nordic Council of Ministers. The UK Environment agency published an excellent two page article on the relationship

between high temperature, low oxygen solubility, and anaerobic conditions in a composting pile; the article can be found [here](#).

Positive CASP: Odor prevention with a BMP design and odor scrubbing with a moist bio-cover layer

The Renewable Sonoma team submitted a compost facility design with positive aeration and a moist bio-cover layer. When a proper BMP mix is created, a positive CASP with an in-slab aeration floor and a 12-18" thick moist bio-cover layer can do an excellent job at minimizing and scrubbing odors. Aspects of this design which are important in odor prevention and treatment include:

- An irrigation system mounted to the push walls to maintain bio-cover layer moistness and temperature. Bio-cover layer performance is directly related to moisture content and temperature, as the microbes which are best able to consume volatile organic carbon compounds which cause odor work best at mesophilic temperatures (40°C) and moisture content above 50%.
- A bio-cover layer 12-18" thick. The bio-cover layer is applied to the surface of each newly established pile within the bunker wall configuration. It is applied with a wheel loader and to ensure at least 12" nominal thickness across the pile surface, ECS recommends a depth of 12-18" to be conservative. The bacteria in the biofilm on the woody matter in this 12-18" thick layer perform the odor scrubbing function; so the depth of this layer plays an important factor.
- Peak aeration capacity of 3 - 6 CFM/cubic yard, depending on the energy inherent in the mix, to control pile temperature below 60°C for over 80% of the process retention time.
- CompTroller™ (used at all ECS sites) to automate the control of pile temperature reducing operator error

An excellent ECS reference facility for a positively aerated outdoor CASP with a stringent odor control requirement is [AgriService's Oceanside facility](#). They process 70,000 tpy of yard waste, low solids food waste, and SSO from residential collection. Their facility is a positively aerated turned pile (ATP). With the inclusion of turning in the process, especially in the first few days of composting, there is greater potential for odor release than with a static process. However, despite the Oceanside facility being surrounded by residential and commercial, some as close as 2000' away, they have not had odor complaints since converting from a windrow facility to an ECS positive ATP in 2012.



Agriservice's El Corazon Compost Facility,

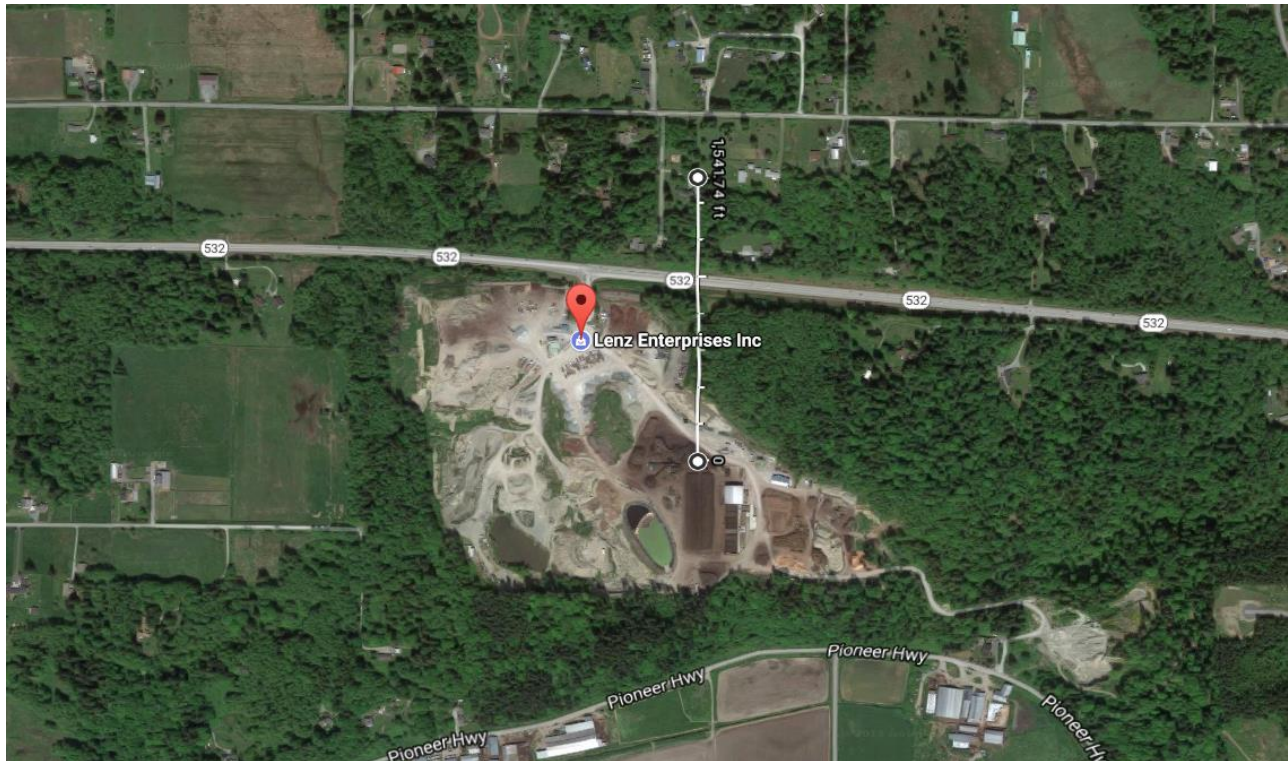
While we believe that a positive ECS ASP can be run without odor issues, we understand that Sonoma County has some concern around the ability of a positive ASP to manage fugitive odor emissions. The positive ASP is sensitive to BMP operations and if additional redundancy were desired, the facility can be designed with reversing aeration.

Reversing Aeration ASP: ability to capture and scrub all process air in a dedicated biofilter

A reversing ASP adds the ability to negatively aerate each bunker in the original positive ASP design. Operationally, this means that each bunker can be aerated positively during loading to prevent orifice clogging, then switched to negative aeration for a specified number of days to scrub VOCs and odors while they are at their highest concentrations, then switched to automated reversing aeration for the most uniform processing of the pile. In the final reversing aeration stage, the CompTroller™ switches aeration direction to each zone when the difference between top and middle pile temperatures grow beyond a defined set point (such as 5°C). With aeration direction reversal, the section of the pile which was cooler (i.e. the bottom of the pile in positive aeration direction) then becomes hotter with reversed airflow (pulling hot air through the pile to the floor). Reversing aeration minimizes both hot spots and cold spots in the pile ensuring lowest lifecycle odor production and fastest decomposition.

When the reversing system is in the positive aeration direction, the same 12-18" bio-cover layer as in the positive ASP, will efficiently scrub VOCs and odors. When in negative aeration, the process air is completely captured and can be scrubbed by a dedicated 4-5' tall biofilter. ECS designed biofilters routinely achieve 90-95% reduction of odors.

One of the best ECS reference facilities for a reversing CASP is the [Blenz Facility in Stanwood, Washington](#) which composts Seattle's food-rich SSO. The facility is less than 1500' from rural residential homes. It was originally designed for 30,000 tpy but with upgrades and aggressively short primary retention time (~10 days) the facility throughputs 60,000 – 70,000 tpy. The Lenz facility operates free of nuisance odor. It is regulated by the Puget Sound Clean Air agency; the same agency has cited Cedar Grove (Gore cover technology) dozens of times for odor impacts leading to hundreds of thousands of dollars in fines.



Blenz compost facility at the Lenz Enterprises gravel operation, Stanwood, WA.

The Blenz and AgriService compost facilities are not enclosed or covered with fabric. The high aeration rates supplied to both facilities are instrumental in odor prevention and the aeration rates are too high to be covered with fabric. Even from a water management perspective, covers are not necessary as ASPs consume more water than what falls as precipitation even in a Pacific North West winter. However, some situations require an aesthetic appeal that fabric covers provide. To meet this demand, ECS developed the AC Composter; an impermeable but perforated fabric cover system that covers a negative ASP bunker.

Negative AC Composter: a covered Best Available Control Technology (BACT) with superior optics

The AC Composter covers shed water and allow high aeration rates through the dense grid of perforations along the length of the cover. The system has a positive aesthetic appeal, but considerable additional operating expense deploying and retrieving the covers and maintaining the fabric and pulling edges. This system still needs the 12-18" of insulative top cover to meet the CalRecycle PFRP requirement. The

system cannot work in reversing aeration as the fabric cover would balloon off the pile and air would escape along the edge of the cover. The San Joaquin Valley Air Pollution Control District has designated the ECS AC Composter as BACT, achieving >80% reduction in VOCs from composting.

One of the larger reference facilities for the AC Composter is the [Barr-Tech facility in Spokane, WA](#). This facility was designed to process 95,000 tpy. We learned that they stopped using the covers recently due to the cover's operational costs and similar performance without the covers. Nevertheless, as can be seen from the photos below, the covers provide a certain aesthetic appeal which helped Barr-Tech get permits and win contracts when they first proposed this facility back in 2010.



Barr-Tech, Spokane, WA.

L: Odor Impact Minimization Plan

ODOR IMPACT MINIMIZATION PLAN

Introduction

This is a preliminary Odor Impact Minimization Plan (OIMP). Renewable Sonoma will prepare a full OIMP as part of the normal regulatory permitting process and in collaboration with SCWMA and LTP management.

This OIMP has been developed to provide guidance to on-site operation personnel in the handling, storage, and removal of compostable materials, in accordance with 14 CCR 17863.4. This OIMP will be revised as necessary to reflect any changes in the facility design or operations. A copy of the revision will be provided to the Local Enforcement Agency (LEA) within 30 days of the changes. In addition, Renewable Sonoma will review this OIMP annually to determine if any revisions are necessary.

Renewable Sonoma will accept source separated curbside green and food materials, commercial food discards and self-haul yard debris and wood scraps. to produce soil amendments, mulches and energy. Organic material is received from the public and commercial sectors. The feedstock will be received in a negative air pressure building. The building will be equipped with an automatic fire sprinkler system. The material (other than self-haul, which is clean) will be prescreened to remove fines and the coarse material is sorted through a sort line for trash removal. The sorted material will be stockpiled for grinding. Once the material is ground, it will be conveyed to the adjacent Covered Aerated Static Pile (CASP) pad. The fines from the screen will be blended with commercial food discards and piped to the AD facility. Material destined for compost undergoes PR in accordance with 14 CCR 17868.3.b.3 and will be processed until the compost meets marketable conditions. In addition, Renewable Sonoma may accept agricultural by-products such as grape pomace, diatomaceous earth, manures, etc. which are incorporated into the fresh composting material. To amend finished products Renewable Sonoma may also bring in loam, rice hulls, other soil amendments.

Renewable Sonoma will process an average of 375 tons per day and annual loading of 121,000 tons.

1. Odor Monitoring Protocol

A. Proximity of Odor Receptors

Renewable Sonoma will operate its facility at Meadow Ln in Santa Rosa. The predominant uses on Meadow Ln and the neighboring Llano and Walker Rd are:

1. Laguna treatment Plant — Water treatment and biosolids composting
2. Grazing land
3. Nearby residences
4. Other agricultural
5. Other

The closest on-site odor receptors are on-site personnel, as well as the public and commercial sectors bringing feedstock the compost site, plus those visiting the compost

retail site to purchase compost or mulch. The closest off-site receptors are the activities listed above.

B. Method for Assessing Odor Impacts

Potential releases of odor will be monitored daily. A Daily Odor Monitoring Log of on and off-site odor observations will be kept in the office.

Monitoring Best Management Practices (BMP) and good housekeeping measures will be implemented to minimize the release of objectionable odors. Renewable Sonoma will operate on a cement surface that will be cleaned by a sweeper to minimize compostable materials outside of the compost areas. The site is on a 1 to 2% slope. The ponding of water in contact with compostables is not expected and will be immediately corrected if it does.

If objectionable odors are detected on site, Renewable Sonoma will implement the following protocol:

- Investigate and determine the likely source of the odor.
- Patrol the site and the area of off-site receptors to determine if the odors are migrating off site.
- Determine how on-site management practices can remedy any off-site problem and take immediate steps to implement these practices.
- If an odor is detected in the location of the receptors and the odor is linked to a specific activity, such as grinding, conveying, movement between phases or screening, that activity will be halted and investigated.
- If a specific compost zone or stockpile is identified as especially odorous, the odor-reducing enzyme (e.g. Suppress, concentration of no less than 0.2%) will be immediately and directly applied to the suspect pile.

2. Meteorological Conditions

A. Wind Velocity

The mornings are usually calm. Later in the day winds can increase. Higher winds can be associated with storms.

B. Wind Direction

Winds typically come from the west. During storms, winds may shift to the north or southwest. Warm weather conditions may bring off-shore flows from the east. A wind sock will be in view of the operators who will monitor wind direction.

C. Weather Station

A weather station will be on-site and will be consulted to adjust appropriate activities.

3. Complaint Response Protocol

In the event a complaint is received, the operator will

- Investigate the complaint at the source of the receptor.

- Make a determination if the odor can be traced to Renewable Sonoma's operations.
- Inform the Local Enforcement Agency (LEA, Sonoma County Dept. of Environmental Health) which actions, if any, will be taken.
- Implement corrective action.
- Document the complaint in a Complaint Received Log (Special Occurrences Log).
- An odor monitoring log will be maintained at the office.

4. Design Considerations for Minimizing Odors

To minimize the risks of odor problems, the composting site will be designed to handle the volume of incoming materials, not permit water run-off, optimize irrigation practices and use appropriate equipment for processing.

A. Negative Air Pressure Receiving Building

All material will be tipped in a negative air pressure building to contain odor impacts. The air removed from the building will be processed through a biofilter to neutralize any potential odors. Feedstock for the anaerobic digester will be piped from the receiving building to the AD plant without exposure to the atmosphere. Ground, blended organics for composting will be conveyed to the aerated static piles.

B. Feedstock Characteristics

The feedstock for compost consists of yard debris, such as grass clippings, brush and tree trimmings, manure and food materials. Mulches are either made from yard debris or wood scraps.

C. Method and Degree of Aeration

The feedstock is ground to have a particle size of < 3" to maintain porosity. A CASP technology will be utilized which provides aeration to the piles to minimize odors. Reverse aeration will be employed to further reduce the risk of odor. Each bay/zone has its own air system that can be adjusted as needed. After 25 days the material will be moved to phase two. After 30 days the material will be moved the screening plant. Moisture will be adjusted as appropriate between each phase. One bay may be dedicated to self-haul yard debris mulch production for a 3 day aeration process.

D. Moisture Content of Materials

Incoming feedstock varies in moisture content from season to season. Moisture will be initially adjusted at the grinder to 60-65%. Moisture content will be further monitored and adjusted between the two phases of the CASP process. During the end of each phase the piles will be allowed to dry to 40% moisture content. After Phase 1, the moisture content will be brought up again to 60% with AD water; after Phase 2, the material will be screened at about 40% moisture content.

E. Airborne Emission Production

To reduce airborne emissions, water will be applied during the grinding process. Prior to grinding, water may be applied to moisten both wood and yard waste that has a low moisture content. To minimize airborne emissions from screening of finished compost and mulch, screening will be done when these materials are at least 35% moisture content.

E. Process Water Distribution

Digestate from the AD plant will be added after grinding to obtain the desired moisture content. AD water will be also used for moisture control and other irrigation substitutes may be used as needed.

F. Pad and Site Drainage and Permeability

The facility will be designed for Zero Discharge of water run-off.

Material receiving and sorting will take place in the enclosed building. The grinding and composting pads will be located on a cement surface that is sloped at a 1% to 2% angle to minimize ponding. All storm water on the site will flow through a 100-year 24- hour pond and then be processed at the Laguna Treatment Facility. Leachate water from the composting process will be recycled into the compost feedstock.

G. Equipment Reliability

All of Renewable Sonoma's equipment will be maintained per manufacturers' recommendations.

H. Personnel Training

All Renewable Sonoma personnel will be appropriately trained for their tasks. Upon approval of the final OIMP, training sessions will be held to assure that key employees are familiar with this plan. Training sessions will be held annually and within seven days after any modifications to the plan have been approved.

I. Weather Event Impacts

High winds/wind still conditions: Odor monitoring will take place daily. While no odor problems are anticipated, if a pattern of problems were to occur and that can be correlated to specific wind conditions then odor causing activities will be avoided during those conditions. Solutions will be sought to alleviate such odor causing conditions in the future.

Continuous heavy rainfall: Initial processing is done indoors. The composting process takes place with aeration systems. Even under the heaviest of rain, the systems will not saturate. No impact from rain is anticipated.

J. Utility Service Interruptions

Compost piles using the CASP system remain aerobic for some time even when a power outage stops mechanically blown aeration. During power outages, aeration dampers can be manually placed in the open position. Additionally, air will enter the bottom of the piles through convection to reduce the likelihood of odor generation. Some smaller equipment will be electrically operated, and a generator may be used to operate essential equipment when utility service interruptions occurs. In case of an extended power outage a contract grinder will be brought in.

K. Leachate water

Leachate water draining out of the CASP will be collected separately from other storm water and collected in storage tanks with digestate. The leachate water from the tanks will be recycled onto incoming feedstock.

5. Operating Procedures for Minimizing Odors

The primary sources of odors are expected to come from freshly arriving feedstock and the on-site transportation of moisture-adjusted feedstock.

Renewable Sonoma will work with haulers and transfer stations to minimize the off-site residence time of feedstock in order to minimize odors of incoming material.

Once material processed in the negative pressure receiving building, it will be placed in a zone/bay, and a 25 and 30-day composting process will begin. After approximately 55 days the finished compost is ready for screening.

A. Aeration in the actively composting organics will be maintained automatically using blowers, damper actuators and temperature probes for each covered aerated static pile zone/bay in each of the two composting phases. A base line aeration rate will be maintained to keep the piles aerobic and preventing it from generating foul odors. Above the baseline aeration rate, temperatures will be controlled by increasing the airflow to each bay. Reverse aeration will be used to maintain even temperatures below 145 degrees F throughout the compost piles help to reduce odor generation.

B. Moisture Management is essential to reduce odors that can be generated from saturated organic materials. Moisture addition is also essential to keep the composting process robust to reduce microbial odors within the compost piles, so water will be added as needed during grinding and when the piles are moved between phases. The biolayers will also be kept moist to optimize its function. Sources for irrigation include using digestate after the grinder and AD water at the second phase. Leachate water will be recycled into the first phase materials with the digestate.

C. Feedstock
See 4B above.

D. Drainage Control
See 4F above.

E. Pad Maintenance
Site personnel will regularly inspect the pad and drainage pipes for evidence of ponding or drainage problems. Corrections will be made as needed. The operating pad will be kept clean of organics. A sweeper will be employed.

F. Stormwater Pond Controls. A pond holding a 100-year 24-hour storm event will be aerated to minimize odors. Between storms the pond will be drained to the LTP.

G. Storage Practices

1. Storage time

a. Feedstock

Renewable Sonoma will plan operations to process materials within 48 hours of receipt.

b. Processed Material

Renewable Sonoma will plan to transport processed material to the compost pad/AD plant within 48 hours of receipt. There will be stockpiles of finished products include wood chips, various types of compost and mulches, and “overs.”

2. Pile Geometry

a. Feedstock

There may be five different sources of feedstock in the receiving building: self-haul yard trimmings, unsorted curbside and transfer station-collected yard trimmings with food discards, commercial food discards, sorted curbside and transfer station-collected yard trimmings, and wood scraps.

b. Finished Material

There may be four different sources of finished stockpiles: yard trimming mulch, various composts, yard trimmings (bulking material) for the LTP, and wood mulch.

H. Contingency Plans

1. Equipment

In the event of equipment breakdown, Renewable Sonoma will determine the impact due to down time. If repairs are expected to be completed before adverse environmental conditions would occur, Renewable Sonoma will not rent replacement equipment. When repairs are expected to be so lengthy as to risk adverse environmental conditions, Renewable Sonoma will pursue equipment rental, if available.

2. Water

Renewable Sonoma will have a 3,000-gallon water trucks on site for dust control. Recycled water from the LTP will be used for dust control.

3. Power

The grinder, pre-screener and sort-line inside the receiving building will be powered by electricity as will the CASP blowers and outdoor screen. All outdoor moving equipment will be powered by diesel engines. A 500-gallon fuel storage tank is maintained on site. Renewable Sonoma intends to evaluate use of alternative fuels, including natural gas, Renewable Natural Gas and biodiesel.

4. Personnel

Renewable Sonoma anticipates having 20 employees. Cross training will be provided to maintain optimal operations management during sick leave, vacations, or job termination for any position.

I. Biofiltration

SCS and Engineered Composting Systems (ECS) will co-design the biofilter for both the receiving building and the CASP system.

J. Tarping

No tarping is anticipated.

OIMP Training Outline

Monitor for odors on-site

- A Daily Odor Monitoring Log of on and off-site odor observations will be kept in the office
- Report odors problems to supervisor, supervisor will notify owners
- Identify the source of odors
- Apply enzyme (e.g. Suppress) as needed (1 gallon in 500 gallons of water) and take other appropriate action as needed

Pile management

- 72 hours to sort, 72 hours to grind, 72 hours to field. First in, first out.
- Putrescibles: cover within 30 minutes. Blend within 1 hour. If unusually smelly, apply enzyme. Ship compost to field/AD daily. If no space 72 hour maximum residence time.

Operating surface

- Report ponding
- Correct areas that create ponding
- Keep surface clean
- Use sweeper before storms
- Keep sediment traps clean

Weather mitigation

- When winds blow towards neighborhood, stop odiferous activities
- Haul putrescibles when wind is not blowing towards receptors as warranted

Pond management

- Pump pond between storms
- Keep pond aerated when filled

M: Product Quality Specifications

Product Quality Specifications

Renewable Sonoma, in keeping with the standards set by Sonoma Compost, is dedicated in creating products that reflect the needs of the community and meet quality standards. Based on past experience, the needs of the community for compost products can be expressed through the following table:

	LOW NITROGEN REQUIRING PLANTS	HIGH NITROGEN REQUIRING PLANTS
WELL DRAINED	SONOMA COMPOST	ORGANIC HI-TEST COMPOST
POORLY DRAINED	TERRA LITE	MALLARD PLUS

Nitrogen requirement and soil type mostly drives the products customers seek. Renewable Sonoma intends to remain responsive to that demand.

The following requirements for quality control will be met:

CalRecycle has requirements for pathogen reduction, metals and contamination.
Section 17868.3. Pathogen Reduction.

If the operation or facility uses an aerated static pile composting process, all active compost shall be covered with 6 to 12 inches of insulating material, and the active compost shall be maintained at a temperature of 55 degrees Celsius (131 degrees Fahrenheit) or higher for a pathogen reduction period of 3 days.

Operators that produce compost shall ensure that:

The density of fecal coliform in compost, that is or has at one time been active compost, shall be less than 1,000 Most Probable Number per gram of total solids (dry weight basis), and the density of Salmonella sp. bacteria in compost shall be less than three (3) Most Probable Number per four (4) grams of total solids (dry weight basis).

Section 17868.2. Maximum Metal Concentrations. Compost shall not contain metals in excess of the maximum acceptable metal concentrations shown in Table 3. Compost that contains any metal in excess of any maximum metal concentrations shall be designated for additional processing, disposal, or other use as approved by local, state and federal agencies having jurisdiction.

Table 3
Maximum Acceptable Metal Concentrations

Constituent	Concentration (mg/kg) on dry weight basis
Arsenic (As)	41
Cadmium (Cd)	39
Chromium (Cr)	(see subdivision (a)(1) below)
Copper (Cu)	1500
Lead (Pb)	300
Mercury (Hg)	17
Nickel (Ni)	420
Selenium (Se)	100
Zinc (Zn)	2800

Arsenic (As)	13 ppm
Cadmium (Cd)	10 ppm
Chromium (Cr)	200 ppm
Copper (Cu)	600 ppm
Lead (Pb)	300 ppm
Mercury (Hg)	10 ppm
Nickel (Ni)	200 ppm
Selenium (Se)	36 ppm
Zinc (Zn)	2800 ppm

Sonoma Compost helped develop stricter standards for Biodynamic Compost (table above to the right). Renewable Sonoma will meet the CalRecycle standards, but will also strive to meet the Biodynamic standards.

Section 17868.3.1. Physical Contamination Limits. As of January 1, 2018 Compost shall not contain more than 0.5% by dry weight of physical contaminants greater than 4 millimeters; no more than 20% by dry weight of this 0.5% shall be film plastic greater than 4 millimeters. Compost that contains physical contaminants in excess of either one or both of these limits shall be designated for additional processing, disposal or other use as approved by local, state or federal agencies having appropriate jurisdiction.

Renewable Sonoma through their extensive outreach and education program and robust sort line and final screening will be able to produce compost that is virtually free of contaminants.

NOP standards/CDFA listed as allowed for organic food production. Consumer confidence in recycled organics products is still most enhanced by being listed as an allowed material for use in organic agriculture. The California Department of Food and Agriculture (CDFA) lists Organic Input Materials (OIM) for the National Organics Program (NOP) All products that can meet the CDFA standards will be submitted to be listed. Path Mulch and compost containing biosolids will not qualify for this standard.

OMRI is no longer valid in California. As a result, an OMRI listing will not be pursued. While CCOF growers at times still ask for OMRI, we educate the farmer on the current requirements under the CDFA requirements. At this point Sonoma Compost still has products listed through CCOF upon farmers requests and Renewable Sonoma will comply with those requests as the arise.

US Compost Council Seal of Testing Assurance (STA) listing may be obtained. The required standards will be met. Past experience has proven that this listing is not a requirement sought by many users. Having the NOP standard/CDFA listing is much more effective for marketing the compost. Nonetheless, the requirements set forth in the STA program will be met.

The products produced are made from recycled municipal materials. Product Disclaimer: The products will be very clean. However, they are recycled materials, not virgin feedstocks. Very small pieces of non-organics may be found.

Cancellation/Refund Policy

Renewable Sonoma seeks the satisfaction of the customer base. After an order is placed it can always be canceled at no cost as long as the delivery has not started yet. The customer will not be billed. Renewable Sonoma will ask that the order will be canceled no later than 2 hours before the scheduled delivery. If the customer is not satisfied we want to know. If the wrong product has been delivered, it will be replaced with the right product. If the product did not perform as it should it will be replaced or a refund will be given. Renewable Sonoma will always evaluate the problem reported and do its best to find a solution.

N: Marketing Plan

**Organic Materials Diversion
& Processing Program**



Marketing Plan



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Renewable Sonoma is providing this Marketing Plan as part of our proposal.

Company Overview. Renewable Sonoma proposes to operate the Sonoma County Organic Recycling program for the SCWMA. The program will take yard debris, food discards and wood scraps and turn these into valuable soil amendments that meet the needs of landscapers, farmers and backyard gardeners in Sonoma County.

The marketing of the product will highlight the anaerobic digestion (AD) component as a factor of sustainability and a step towards reversing climate change. While AD will not affect the compost specifications, having a carbon beneficial facility will speak to the environmentally sensitive community.

Emphasis will be placed on producing materials that are acceptable on organic farms, and are listed as “Allowed” materials with the California Department of Food and Agriculture (CDFA) Organic Input Material Program.

In addition to producing composts and mulches, Renewable Sonoma aims to sort incoming organics to recover usable lumber and firewood to make available for sale at affordable prices. “Overs” from the wood and compost processing will be used in the biolayer, re-composted or made into mulch material.

Renewable will have as part of its facility a Sonoma Compost Co. retail yard where all of its products are available directly to the public. The retail yard will include up to 1,200 square feet (SF) of landscaping demonstrating the various uses of our soil amendments. The retail office will also coordinate sales for delivery to our broad-based market.

In order to provide better marketing services to the northern part of the County, Renewable Sonoma will create a retail outlet for its products at the new Harmony Ag Supply on River and Fulton Roads, formerly Cameron and Cameron. See attached letter from Harmony Farm Supply.

A main component of services provided, a marketing tool, is to give information and donations to our local community. Activities will include: presentations to children and adults about [composting](#) and the importance of nature’s decomposition process; education on carbon farming and attaining healthy soils, donating compost to nonprofits, community, and school garden programs; and offering informational field trips at our organic recycling facility.

Our company goals go beyond keeping organic materials out of the landfill. Emphasis will be placed on supporting growers to create healthy soils. As a result, growers will get vigorous plant growth, good soil structure, water conservation, minimized erosion potential, reduced use of fertilizer and pesticides. In addition, Renewable Sonoma will promote carbon farming/gardening to take carbon dioxide from the air and lock it into the soil, thereby reversing the impact to climate change. Promoting organic and sustainable management practices that minimize chemical use, better use of resources, meeting Model Water Efficient Landscape Ordinance (MWELO) requirements and helping to preserve and climate-resilient farming/gardening through recarbonization of soil are important company principles.

Renewable Sonoma will actively look to help businesses to find ecological solutions to organic waste problems.

Anticipated Market at Start-up. Based upon sales history prior to 2015, we estimate the following percentage of sales by product category:

Product	Percent of Sales
<u>Yard debris products</u>	<u>(In cubic yards)</u>
Screened Compost	75-80%
Screened Mulch	20-25%

Wood debris products (In cubic yards)

Reused Lumber	5-10%
Mulch	90-95%

Biofuel used to be an economical use for 'overs' left after screening compost. The market for biofuel no longer exists and our program is designed not to rely on that outlet, but rather by including a sort line which will allow thorough processing to create a near contaminant free feedstock for composting and to recycle the overs back into the compost/mulch process. The fire of 2017 has created a tremendous need for soil rehabilitation. While this rehabilitation will start in the next years, redevelopment of the area will most likely last 5-7 years from now. Renewable Sonoma will lend its in-house expertise to assist the community in rebuilding soil health to restore the beauty and fertility of our County.

MWELo went into effect as of December 1, 2015. This requires new landscapes over 500 ft² and rehabilitated landscapes over 2,500 ft² to meet the MWELo requirements. The requirements include prescriptive use of compost and mulch. Having co-organized and presented at an MWELo workshop we are intimately familiar with the needs and able to assist our community.

In 2015, Governor Brown announced the start of a new Healthy Soils Initiative. This program is designed to increase soil carbon while reducing greenhouse gas emissions from agriculture. At the foundation lies [carbon farming](#), or at a backyard scale carbon gardening. Renewable Sonoma has made it its mission to be at the forefront in Sonoma County to promote these efforts. The products produced through Renewable Sonoma will be key driving forces in achieving the goals Governor Brown has set forth.

Operating Procedures and Quality Control. In order to create safe and effective compost, and comply with state regulations, Renewable Sonoma has ongoing procedures to maintain appropriate levels of three key components: moisture, temperature, and aeration. We test materials monthly to ensure that standards required by CalRecycle are being met, specifically pathogen reduction and heavy metals. More specifics about this are described later in this report.

Maintenance of Records.

- Logs of all inbound yard and wood debris will be maintained on-site.
- Logs of all outgoing Renewable Sonoma shipments and computerized invoices for all sales will be kept at the office.
- Monthly and annual summaries of the above information will be tabulated.

The above information will be all available to the Agency for CalRecycle reporting requirements.

Product Descriptions

RS aims to provide basic composts and mulches that serve the needs of local farmers, landscapers, and backyard gardeners.

We intend to produce to the maximum extent possible, products that will be listed as “allowed” materials for certified organic farms by the California Department of Food and Agriculture (CDFA) Organics Input Program. It is anticipated that 80-90% of the products produced will be CDFA listed.

RS will take advantage of the Sonoma Compost name which has gained trust in Sonoma County over the past decades. As such, all products will be marketed under the Sonoma Compost name. Since the past products have proven to be responsive to the needs of our community and are desired by the community former names of products will be reintroduced when possible. The nature of the feedstock may be such that not all products may be reproducible.

Sonoma Compost

Sonoma Compost will be made from composted yard trimmings with food scraps that are processed to meet all state requirements regarding pathogen reduction and weed seed kill. This product is screened to a particle size of $<1/2$ ” and used as a soil amendment in landscape and agricultural applications where a low-nitrogen product is desired.

Terra Lite

Terra Lite will be made from Sonoma Compost with the addition of composted rice hulls. It is recommended for use in clay soils where drainage needs improvement and low nitrogen content is desired, such as for natives, trees and shrubs and vineyards.

Hi-Test Compost

This blend of composted yard trimmings with food scraps and specific high nitrogen sources offers the benefits of Sonoma Compost plus increased nitrogen content. Hi-Test Compost is screened to approximately $<1/2$ ” and used as a soil amendment in landscape and agricultural applications where a high-nitrogen product is desired.

Mallard Plus

This premium-quality blend will combine Hi-Test Compost with composted rice hulls and meets all state compost requirements. It can be used as a soil amendment and backyard gardeners have valued its ability to improve heavy clay soils, while being light and easy to handle. Mallard Plus is screened to a particle size of $<1/2$ ”.

Vineyard Mulch

This coarse woody mulch will be derived from ground self-haul yard trimmings. Vineyard Mulch is screened to a minimum particle size of approximately <2 ” for a neat, less woody appearance. It will be composted for a minimum of 3 days for pathogen reduction and sold to backyard gardeners, grape growers, and landscapers. This mulch is sought after by residents throughout the Bay Area and not enough can be produced. It provides an elegant finish to landscapes and has proven to be non-floatable, a great benefit for areas where excess water may collect at times.

Path Mulch

This woody mulch, will be made from ground and screened recycled wood, is especially appropriate in areas where a “walk-on” mulch is desired. It’s screened to a minimum particle size of approximately <2”. This mulch is not an allowed amendment under the CDFA Organic Input Program.

Christmas Tree Mulch

Every year after Christmas, Sonoma County collects source separated Christmas trees. As Sonoma Compost has done in the past, Renewable Sonoma will accept these trees at no charge. These trees are turned into our popular Christmas Tree Mulch with is excellent for use on acid loving plants such as Rhododendrons, Azaleas, blueberries, etc.

Compost from Biosolids.

Renewable will be marketing the WaterSmart Compost from the Laguna Treatment Plant (LTP). Renewable Sonoma may also compost biosolids from the LTP. A specific marketing strategy will be developed for this product. Placing the LTP in light of a recycling facility will be a focus in this marketing approach. This product will not qualify for CDFA listing at this point.

Feather-Lite Amended Soil

This blend of our Mallard Plus compost and sandy loam makes a topsoil that keeps its volume longer than composts and mulches. It’s great for filling raised beds, replacing poor quality soil, adding elevation, leveling a project site, or filling in behind a retaining wall.

BioDynamic Compost

While Sonoma Compost Company produced Biodynamic Compost analogous to Sonoma Compost and Organic Hi-Test Compost, but prepared using biodynamic principles and preparations, Renewable Sonoma will need to evaluate how this program fits into the new structure. These dark, well decomposed composts were made in both high and low nitrogen versions. Many growers in the biodynamic community relied on these products. It is anticipated that when Biodynamic Compost would be made that it would be cured in location at the end-user’s site.

Firewood

Firewood would be culled from incoming self-haul yard debris and is a blend of mixed species found in Sonoma County. After being split, it would be sold both by the cubic foot and the cord.

RS plans to create diverse markets for the compost and mulch products. The customer target group includes backyard gardeners, landscapers, organic farmers, grape growers, and soil dealers. In addition, local jurisdictions will be offered both allocated and purchased compost and mulch for public projects such as parks, athletic fields, highway medians, and lawn conversion programs.

Below is our ongoing plan for promoting our products:

Marketing Activities

Effective Advertising. Renewable Sonoma will make use of a print advertising campaign, including exposure in phone directories (SBC Yellow Pages), newspapers, trade journals, and the Farm Trails Map. Renewable Sonoma will request to be also be included in the Agency's Recycling Guide.

Informative Website. Renewable Sonoma will integrate its website with the Sonoma Compost website to effectively reach the community. The website will be kept up to date to encourage visitors to return to stay informed. The site will be providing a wealth of information on backyard composting, compost and mulch use, announcing workshops, etc. Special focus will also be on [soil health](#) and carbon farming, green energy for organics, and benefits of biosolids compost. The website will also be a landing place for businesses to learn about how to implement effective organics recycling programs. Promoting our website will be an integral part of our advertising.

Social Marketing. Renewable Sonoma will utilize social marketing platforms and will make regular updates related to sales, product information, workshops or general composting information and resources.

Outreach. Our marketing efforts will include tours of the facility, workshops, and presentations at conferences, trade shows, public fairs and festivals, colleges, gardening clubs, Rotary Clubs and other community events. In the tradition of Sonoma Compost, Renewable Sonoma will embed itself into the community to be an actively participating member in the landscape and farming community as well as with organizations such as Daily Acts to work promote grassroots sustainable action in our County.

On-Site Demonstration Garden. Renewable Sonoma will make all effort to include on its processing site landscape beautification, demonstrating the use of its various products. It will offer customers and visitors an opportunity to see what compost and mulch can accomplish, even with very poor soil. It also allows us to showcase our various products side by side, so that customers can make informed purchase decisions. A container gardening demonstration display will highlight the composts and soil produced by Renewable Sonoma compared to a random off-the-shelf commercial product. It is a dramatic exhibit of the value of our products. Other tools such as a model lawn conversion/ sheet mulch display can be educational for our customers interested in more ecologically sound landscape or food production gardens.

Distribution of Products

Landscape Professionals. We expect that Renewable Sonoma products will be specified by landscapers, landscape designers, and landscape architects for projects in Sonoma County. All

efforts will be made to re-establish the trusted relationships that have existed for over 20 years. Grape growers. Similarly, we anticipate that our products to be used once again by a large number of grape growers and wineries.

Santa Rosa Laguna Plant. We expect that we will supply the City of Santa Rosa compost facility with “prepared yard debris” from the Organic Recycling Program for use in its bio-solids composting program as part of our synergistic working relationship. Up to 10,000 cy of material will be made available annually at no charge.

Public Projects. Renewable Sonoma intends to work closely with the construction industry and local and regional agencies. As a result, we foresee that Renewable Sonoma products will continue to be specified for significant public projects in Sonoma County and surrounding counties. These projects may include public parks, schools, athletic fields, highway median strips, and community gardens.

Product Donations. Renewable Sonoma will donate composts and mulches to local schools and non-profits. A donation program will be developed for applications that will create fair annual distribution program with clear criteria for evaluating the requests. We will ask that donations further the goals of the Organic Recycling Program by providing tangible educational benefits regarding the importance of organic recycling, soil building and carbon farming/gardening. Educational materials will be made available. Renewable Sonoma will request that donations be acknowledged with signage or be mentioned in a program, or newsletter associated with a particular project.

Compost giveaways may be staged at farmer’s markets, fairs and special events. The public can bring 5 gallon buckets or 1.5 cubic foot bags to help themselves to a product. The giveaway may be used to reintroduce Renewable Sonoma’s Sonoma Compost products back to the community as well as to present new products as appropriate.

Biofuel Markets. The production process produces woody oversize material (‘Overs’) that is screened off after the compost process. Renewable Sonoma does not consider biofuel a viable market and will instead focus through focused quality control on recycling the ‘overs’ through the composting process.

Attractive Product Features

Organic Status. The products produced from recycled yard trimmings will be listed as “Allowed” for use in organic production by the California Department of Food and Agriculture (CDFA) Organics Program to the maximum extent possible. Certified organic farmers rely on CDFA to identify which soil products are appropriate for use on their farms. However, even markets that do not require CDFA allowed organic products appreciate the status and boosts their confidence in these products. 80-90% Of the products sold are anticipated to be listed as allowed with CDFA.

Lab Testing. At least monthly lab tests will be obtained from a certified lab for pathogen reduction and heavy metals to confirm that the compost process met state requirements. Additionally, nutrient analysis will be obtained to provide growers with pertinent information. All efforts will be made to produce premium-quality products that are appropriate for a wide range of landscape and agriculture applications.

US Compost Council Seal of Testing Assurance (STA)

Renewable Sonoma will produce products that meet the requirements of the STA program compost testing, labeling and information disclosure program as set forth in the STA program to further increase consumer confidence in the products produced.

Value-Added Products. Renewable Sonoma will provide blending services to enhance our recycled composts with other amendments as requested by the customer. As such, we can offer value-added products that are well-received by the marketplace.

In order to create effective and quality composts that comply with state regulations, Renewable Sonoma has ongoing procedures to maintain appropriate levels of three key components: moisture, temperature, and aeration. We test materials monthly to ensure that required standards are being met.

Moisture

In order to provide optimal composting conditions, we seek to maintain a moisture content of 40 - 60% in our compost system.

Moisture Content. Yard debris is usually received with a moisture content between 35% and 60%. Self-hauled material is typically drier. The moisture content of materials during processing is determined by feel. For finished compost, we test and receive regular lab reports prepared by a California certified agricultural laboratory. For finished products, we will aim at a moisture content of 35-40%. The CASP system provides the opportunity to aim for consistent moisture content in the finished product year-round, a true added value to the customer.

Moisture Addition. Moisture is added when necessary during the mixing stage after grinding and to actively composting piles. The majority of the moisture will come from the digestate of the anaerobic digester. Additional water may be applied from the water that is extracted from the digestate as needed.

Weather. Renewable Sonoma will track on-site rainfall and overall weather conditions. The compost system is designed such that the products are not affected by the weather. Controls are in place to have year-round optimum composting conditions.

Temperature

In order to perform pathogen reduction in the compost, we follow state regulations for covered aerated static piles that require that we maintain a temperature of 131 °F for at least 3 days.

Aeration

Renewable Sonoma has both an aerobic and anaerobic compost system. The composting process for finished compost is aerobic. Covered Aerated Static Pile composting is Best Available Control Technology (BACT) for composting. This process minimizes the production greenhouse gasses, and potentially odors.

Additives/Agricultural Materials

Renewable Sonoma may add materials to our compost system that enhances the compost, optimize moisture, and increase organics diversion from the landfill. Our proposed waste characterization study may highlight what such amendments may be.

Laboratory Test Results

Renewable Sonoma will test composts monthly for pathogen reduction, metal concentrations, nutrient levels, carbon to nitrogen ratio, and pesticide residues (e.g. clopyralid and organochlorines).

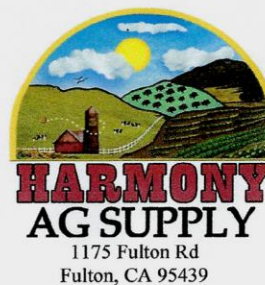
We are confident from our experience and with excellent education and quality control programs in place that the soil amendment products produced will consistently meet or exceed

the industry standards in all these tests mentioned above.

We aim for a product for which the nutrient analysis reports consistently will indicate that the screened material is a well-balanced product. The average carbon-to-nitrogen ratio will indicate good product maturity. The compost is anticipated to have substantial nutrient value that, when used at the suggested rate of application, would correct any degree of inherent deficiency for phosphorus, magnesium, potassium, zinc, and manganese.

Conclusion

For over 20 years Sonoma Compost has met the expectations of Sonoma County to provide the community with high quality compost and mulches. Renewable Sonoma will build upon that reputation. With additional quality control elements in place Renewable Sonoma is confident that we once again will be able to meet or exceed the expectations of our community. Through our involvement in the community we will continuously lend a listening ear to what the needs of our community are and within the realm of our program we will do our utmost to maintain a facility and produce materials that matches the quality of our community.



January 3, 2018

Patrick Carter, Executive Director
Sonoma County Waste Management Agency

RE: Letter of Support for Renewable Sonoma

Dear Mr. Carter:

I am writing to you to express my fullest support of a decision to provide a facility to Renewable Sonoma for the resumption of production of its premium compost, "Sonoma Compost".

The agriculture community in Sonoma County has experienced significant difficulty with regard to the acquisition of the same quality compost that Sonoma Compost had produced. I am energized at the prospect that Sonoma Compost (now Renewable Sonoma) could resume production of its premier compost. I have known Will Bakx and Alan Siegle for many years, and hold them both in high regard for their honesty, integrity, business acumen, commitment to community, and leadership in organic agriculture. The resumption of Sonoma Compost production will provide a desperately needed supply of premium compost to the local agriculture community. It will also provide an opportunity for both of my companies, Harmony Farm Supply & Nursery and Harmony Ag Supply, to become a reseller of Renewable Sonoma's compost. This will create a significant potential for its distribution, and enhance my companies' ability to provide an additional healthy soil amendment to the public. Additionally, North County residents would welcome a premium compost outlet at our Fulton facility which would remove 40 pickup trucks from the Santa Rosa Hwy 101 corridor for each 40 cubic yard truckload of compost delivered to our site.

Harmony Farm Supply & Nursery and Harmony Ag Supply strongly support the award of a facility to Renewable Sonoma.

Thank you for your time.

Sincerely,

Rick Williams
Proprietor and General Manager
Harmony Farm Supply & Nursery
Harmony Ag Supply
707/823-9125

0: Noise Management Plan

Noise Management Plan

This is a preliminary Noise Management Plan. Renewable Sonoma will prepare a full Noise Management Plan as part of the normal regulatory permitting process.

Noise pollution needs to be addressed from a worker's point of view and the living conditions of neighboring properties. Effort will be made to address both during construction and regular operations of the facility.

Noise within the building will be controlled by the building itself. Outdoor noise is controlled through the proper use and maintenance of mufflers and noise suppression systems on equipment.

During Construction

All construction operations will be conducted during regular business hours. Work at night will be avoided.

Good communication will be set up with the neighbors. Besides regular meetings with neighbors a website could be created that makes neighbors aware of the construction activities that are taking place. A phone number will be made available for neighbors to call in when excessive noise problems arise.

Sound levels will be measured as appropriate:

Operations

When employees are subjected to sound exceeding those by California standard guidelines, feasible administrative or engineering controls shall be utilized. If such controls fail to reduce sound levels within acceptable levels, personal protective equipment shall be provided and used to reduce sound levels.

Typical engineering controls involve:

1. Reducing noise at the source.
2. Interrupting the noise path.
3. Reducing reverberation.
4. Reducing structure-borne vibration.

Common examples of implementing such controls are:

1. Installing a muffler
2. Erecting acoustical enclosures and barriers.
3. Installing sound absorbing material.
4. Installing vibration mounts and providing proper lubrication

Electric equipment used when possible by Renewable Sonoma should go a long way in reducing sound pollution. Also, the receiving area is indoors which provides for a great sound buffer.

Guidelines for hearing conservation as described in OSHA publication 3074 will be followed as appropriate. <https://www.osha.gov/Publications/OSHA3074/osha3074.html>

P: Fire Prevention and Extinguishing Plan

FIRE PREVENTION AND EXTINGUISHING PLAN

This is a preliminary Fire Prevention Plan. Renewable Sonoma will prepare a full Fire Prevention Plan as part of the normal regulatory permitting process.

Hazards

Fire begins due to:

- a. Spontaneous combustion
- b. Internal ignition as a result of introduction of hot coals or other smoldering-type ignition source
- c. External ignition as a result of either accidental (e.g. spark from equipment or discarded cigarette), natural (e.g. lightning), or incendiary cause.

Fire and smoldering in organic matter piles can be minimized with proper management. Factors that contribute to the risk of fire are pile size, residence time, moisture and porosity. Factors we have no control over are existing fires coming in with the feedstock, e.g. hot BBQ coals, or externally induced surface fires (sparks, lightning, etc.).

The composting process utilizes microbial activity to raise the temperature in the piles. Under well-managed conditions this will not lead to fires. This same heating process also takes place in piles that are static. Uncontrolled, this biological process may become a chemical process which results in fire or smoldering. Restrictions on pile height and residence time will greatly reduce the risk of fires. Restrictions to the footprint of the piles assures that firefighting is manageable should a fire occur. A fire lane of 15-20 feet allows equipment to reach all sides of a pile.

This protocol is applicable to both the compost site and the receiving site unless noted otherwise.

Residence time

The proposed residence times are structured to minimize the risk of fires. Compost in bays and stockpiled in the mature state is not prone to fires. Mulch products are processed in a timely manner and do not remain on site long enough to become a fire risk through a chemical process. The incoming feedstock and 'overs' stockpiles are most prone to chemical heat production and thus fire. It is therefore important that these piles will be static for no longer than 1 month. It is not anticipated that any feedstock or 'overs' pile will be stockpiles for that long.

Pile size

While the State Code allows for piles 250' X 150' X 25' (34,722 cubic yards), Renewable Sonoma (RS) sees neither need nor justification for piles that size. RS will limit its stockpile sizes to 11,111 cubic yards (100' x 150' x 20'). However, most piles will never reach that size. The maximum pile size adopted by RS is about 32% of the volume allowed under the State Code.

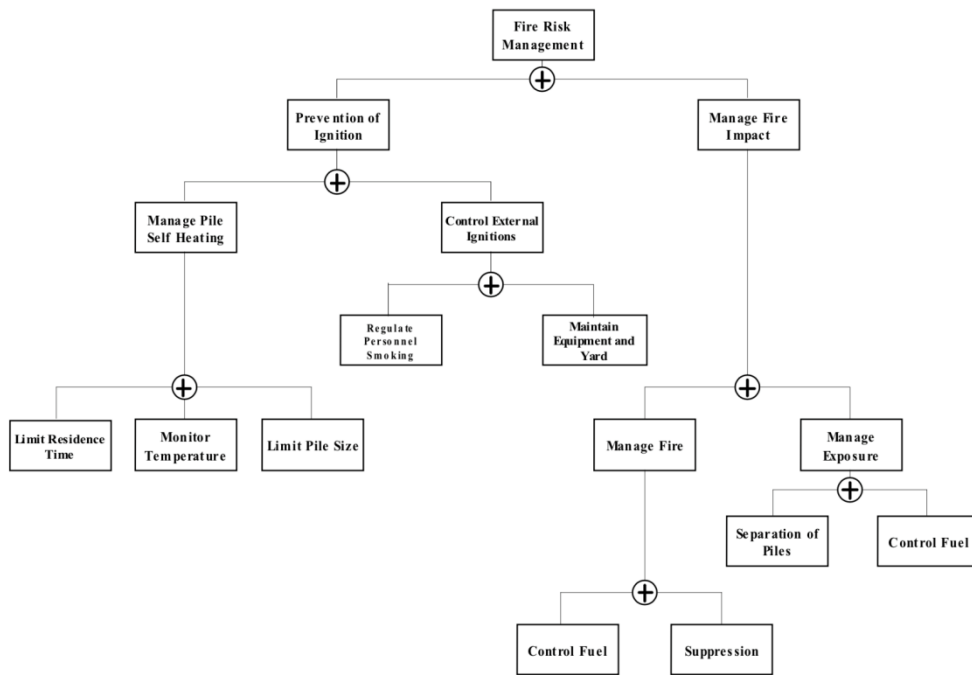


Figure 01. Fire safety concepts tree model showing proposed mechanisms for management of fire risk

Temperature Monitoring

Once weekly, as per the California State Fire Code section 1908.6, temperatures are taken and logged in stockpiles. The temperature log will be kept on-site. While taking temperatures in a stockpile to locate hotspots is like looking for a needle in a haystack, it does bring the operator in close contact with stockpiles on a weekly basis where other observations can be made as well (see below).

It does not appear that thermal imaging as commercially available at the present time would decrease the fire risk.

Observations

Some indicators are often present before a fire is detected:

odor and heat vents. If a cigar-like odor is detected near a stockpile, the interior of the stockpile is investigated, and the pile may be turned as observations warrant. Small vents in the pile that show excessive, forceful steaming warrant further investigation. These two indicators have shown to be more reliable indicators of potential fires than temperature monitoring.

Prevention

Regulate Personnel Smoking –no smoking is allowed at the Compost Facility.

Maintain Equipment

All equipment is inspected and cleaned daily, blown out with compressed air. Special care is taken to clean around exhaust systems.

All equipment has fire extinguishers, checked monthly, certified yearly.

Three pieces of equipment, the Grinder, and two Screens, get a buildup of yard waste or compost around them as part of regular operation and are cleaned twice a day.

Fire Extinguishing

The entire Receiving Building will be equipped with an automatic fire sprinkler system.

A water truck will be staged at the compost site. This water truck will be used at the receiving site as needed. It will be kept filled with water at all times when not in use. Fire hydrant is also located on the compost pad (see site diagram). When any indications of fire/smoldering are noted, the water truck and as many as three loaders as needed will be dispatched to the stockpile of concern. At the compost site fire hoses will be attached to the water source to assist in the fire control. If open flames are present, the fire department will be notified. Water will be applied to the pile to extinguish surface flames. However, water should be applied only to the surface that is burning. Wetting areas that are not affected may act as a catalyst to start a new chemical fire.

Loaders will remove unaffected material from the affected stockpile to isolate material that has no symptoms of fire or char. Material that is charred or smoky will be removed by loader and placed in a location where it can be fully rendered cold with water. This separation of materials will continue until no evidence of charred or burned material is left in the affected pile.

For protection of employees or responders, no one is permitted to climb onto a pile where there is any indication of smoke, charring or a suspicion of fire as there is a risk of the pile collapsing if there is an ash pit inside the pile.

Water Availability

The compost site will have a minimum fire flow of 500 GPM@20 PSIR for a minimum of a 2 hour duration. Fire hydrants with at least one 2.5" outlet shall be located on the primary road at intervals of 1,000' or less. Signs indicating "water for fire department use only" will be posted.

2.5" Fire hoses are available on site, capable of reaching all piles on site.

There is also a water truck to assist in extinguishing a fire. While water is important to extinguish an external fire on a pile, the bulk of fire extinguishing work is done mechanically with a loader. Water is applied to the fire/smolder-affected material.

Staff Training

RS staff are cross-trained on loaders, water trucks and the use of water pump and fire hydrants. RS will incorporate additional cross training on equipment, and review fire identification and fire response training on an annual basis. Quarterly fire drills and record keeping meetings will be held. RS will participate in joint training with the XXX Volunteer Fire Department as requested,

After Hours Response Plan

In the event of an after-hours fire, it is crucial that a response team from SCC gets to the site as soon as possible.

RS has identified two primary response members whose responsibility it is to contact equipment operators to report immediately to the site in case of fire. These members are, in order to be called:

Will Bakx	707 479 8098
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Alan Siegle	707 849 7365
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RS will bring a minimum of three staff to the site to operate at least one water truck, a loader and an additional ground person to operate a fire hose or other task as needed.

Although RS's personnel has the training to handle organics fires, the primary response member will check in with the person in charge from the fire department and take direction from the fire department to assure a collaborative response.

Fire Department

Fire Department contact information and emergency number will be clearly posted at the facility.

The fire prevention plan will be reviewed by the responsible fire department and a regular review schedule will be set.

Reference: <http://poweranddata.info/wp-content/uploads/Codes-%20California/2010%20CA%20Building%20Codes/2010%20CFC.pdf>

Section 1908

SECTION 1908 STORAGE AND PROCESSING OF WOOD CHIPS, HOGGED MATERIAL, FINES, COMPOST AND RAW PRODUCT ASSOCIATED WITH YARD WASTE AND RECYCLING FACILITIES

1908.1 General. The storage and processing of wood chips, hogged materials, fines, compost and raw product produced from yard waste, debris and recycling facilities shall comply with Sections 1908.2 through 1908.10. 1908.2 Storage site. Storage sites shall be level and on solid ground or other all-weather surface. Sites shall be thoroughly cleaned before transferring wood products to the site. 1908.3 Size of piles. Piles shall not exceed 25 feet (7620 mm) in height, 150 feet (45 720 mm) in width and 250 feet (76 200 mm) in

length. Exception: The fire code official is authorized to allow the pile size to be increased when additional fire protection is provided in accordance with Chapter 9. The increase shall be based upon the capabilities of the system installed. 1908.4 Pile separation. Piles shall be separated from adjacent piles by approved fire apparatus access roads.

1908.5 Combustible waste. The storage, accumulation and handling of combustible materials and control of vegetation shall comply with Chapter 3. 1908.6 Static pile

protection. Static piles shall be monitored by an approved means to measure temperatures within the static piles. Internal pile temperatures shall be monitored and recorded weekly.

Records shall be kept on file at the facility and made available for inspection. An operational plan indicating procedures and schedules for the inspection, monitoring and restricting of excessive internal temperatures in static piles shall be submitted to the fire code official for review and approval. 1908.7 Pile fire protection. Automatic sprinkler protection shall be provided in convey or tunnels and combustible enclosures that pass under a pile.

Combustible conveyor systems and enclosed conveyor systems shall be equipped with an approved automatic sprinkler system. 1908.8 Fire extinguishers. Portable fire extinguishers complying with Section 906 and with a minimum rating of 4-A:60-B:C shall be provided on all vehicles and equipment operating on piles and at all processing equipment. 1908.9

Material-handling equipment. Approved material-handling equipment shall be available for moving wood chips, hogged material, wood fines and raw product during fire-fighting operations. 1908.10 Emergency plan. The owner or operator shall develop a plan for monitoring, controlling and extinguishing spot fires and submit the plan to the fire code official for review and approval.

1909.5 Fire protection. An approved hydrant and hose system or portable fire-extinguishing equipment suitable for the fire hazard involved shall be provided for open storage yards.

Hydrant and hose systems shall be installed in accordance with NFPA 24. Portable fire extinguishers complying with Section 906 shall be located so that the travel distance to the nearest unit does not exceed 75 feet (22 860 mm).

Fire in Organics Training

Spontaneous fires occur but can be prevented

Usually:

- Pile size > 9'
- Piles are static (not to be confused with aerated static pile)
- Piles have been subjected to rain or run-on water has or other uneven moisture

Other sources are external:

- Hot coal
- Sparks from equipment

How does the fire start:?

- > 9', static and moisture (October/November prime months)
- Rains seal the pile and water enters unevenly

- Heat builds up, well insulated
- Temperature goes to > 200°F
- Internal smolder like peat bog
- Hits surface and the pile is now ablaze

State Code summary:

- Maximum pile size: 24' x 150' x 250' (or larger by permission)
- Clear, approved separation between piles (15')
- Temperature shall be recorded weekly and records will be stored on-site and available for inspection
- Conveyor systems shall be equipped with automatic sprinkler system
- Equipment (do not store next to pile) shall have appropriate fire extinguishers
- Material handling equipment (loaders, dozers) will be available in case of fire
- A plan for monitoring, controlling and extinguishing fires will be developed and submitted to the fire code official

The plan

- Develop a map identifying all piles
- Identify location of hydrants, water trucks, material handling equipment
- Take temperatures in all piles weekly and record (>170°F is potential problem)
- Do visual and nasal inspection while taking temperature (cigar smell, forced venting)
- Limit residence time of piles to 1 month (record turnings)
- Have turning space
- Minimize water contact to piles (equipment washing)
- Turn mulch and 'overs' piles after > 1" rain event
- Define separation of piles
- Identify contact personnel with contact information and internal fire response team
- Set parameter when to call fire department (have contact info available)

Fire extinguishing protocol

- Call fire dept. as needed
- Do not go on top of the piles, beware of fire pits
- Separate non-affected material of pile from the affected material
- Thoroughly extinguish affected material
- Do not abandon pile until all affected material has been treated
- Follow instructions of Fire Dept.

Q: Carbon Savings Calculations

CARBON SAVINGS FOR RENEWABLE SONOMA

CARBON COMPARISON		Day	year	Lifetime
Baseline emissions - status quo organics	MT CO ₂ eq	56	18,758	375,160
Emissions with proposed project	MT CO ₂ eq	(15)	(5,105)	(102,094)
Project Carbon Emissions Savings	MT CO ₂ eq	(71)	(23,863)	(477,254)
Equivalent cars removed	5,077	(Based on EPA value of 4.7 MT/year/car)		

INPUT ASSUMPTIONS

Heavy Duty diesel mpg	mile/gal	6
diesel Carbon Intensity	MT CO ₂ eq/gal	0.01
Duty cycle of Project	%	92
Heat input digester	MMBTU/year	2,417,760
Carbon intensity of waste heat	MT CO ₂ eq/MMBTU	0
Parasitic Load of digester	kWh/year	3,000,000
Carbon intensity of electricity	MT CO ₂ /kWh	0
Moisture content of finished compost	%solid	50
Compost import distance	miles	60
Compost import load size	ton	40
Current amount of imported compost	ton/year	90,000
Life of Project	years	20

Wet Input to Project		
Wet Self Haul	wet ton waste/year	10,003
Wet Curbside	wet ton waste/year	80,000
Wet Commercial Food	wet ton waste/year	20,726
Wet Manure	wet ton waste/year	5,000
Total wet input	wet ton waste/year	115,729

0.05 Contamination
0.05 Contamination

Self Haul moisture	% solid	75
Curbside moisture	% solid	45
Commercial Food moisture	% solid	18
Manure Moisture	% solid	65

Fraction of proposed project wastes currently going to landfill		
Self Haul	%	0%
Curbside	%	75%
Commerical Food	%	75%
Manure Load size	%	0%

Fraction of proposed project waste currently going to compost		
Self Haul	%	100
Curbside	%	60
Commercial Food	%	0
Manure	%	0

Current Green trip distance	miles	60
Current Mixed trip distance	miles	60
Current Food trip distance	miles	50
Current manure trip distance	miles	0

Current load size to export wastes		
Self Haul	ton	40
Curbside	ton	40
Commercial Food	ton	20
Manure	ton	0

Compost Reduction (raw)	%	50
Compost Reduction (digestate)	%	0
Digester Reduction	%	33

CALCULATION FACTORS

Biogas energy created

Self Haul	MMbtu/dry ton	3.6056
Curbside	MMbtu/dry ton	3.6056
Commercial Food	MMbtu/dry ton	3.6056
Manure	MMbtu/dry ton	3.6056

Carbon reduction for land fill diversion

Self Haul	MTCO2/ton feed	0.21
Curbside	MTCO2/ton feed	0.33
Commerical Food	MTCO2/ton feed	0.39
Manure	MTCO2/ton feed	0

Carbon savings for fertilizer credit

Self Haul	MTCO2/ton feed	0.15
Curbside	MTCO2/ton feed	0.15
Commerical Food	MTCO2/ton feed	0.15
Manure	MTCO2/ton feed	0.15

Carbon savings for decreased soil erosion

Self Haul	MTCO2/ton feed	0.15
Curbside	MTCO2/ton feed	0.15
Commerical Food	MTCO2/ton feed	0.15
Manure	MTCO2/ton feed	0.15

Emission created by composting	MTCO2/ton feed	0.07
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Intermediate Results		per day	per year	lifetime	
Total Input	Wet Tons of feedstock	345	115,729	2,314,580	291.70
Compost	Dry Tons of compost	73	24,540	490,801	61.85
Energy	MMBTU	220	73,822	1,476,432	186.07
					- 60.15
Mass balance error	%	(0.24)			

R: Sample Tonnage, Quarterly, and Annual Reports



ANNUAL REPORT SUMMARY 20XX

Pile CHARACTERISTICS

	<u>width</u>	<u>height</u>	<u>length</u>
Aerated Static P	33'	10'	90'

TEMPERATURE MEASUREMENT

Temperature of all finished compost has reached 131°F for at least 3 days,

AERATION

type: Forced Aeration	Computerized airflow based on temperature feedback
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LABORATORY ANALYSIS

analysis: NUTRIENT	
next date due:	monthly
# of sub-samples:	12

analysis: HEAVY METALS	
next date due:	monthly
# of sub-samples	6/bay

analysis: PATHOGEN REDUCTION	
next date due:	monthly
# of sub-samples:	6/bay

analysis: PESTICIDE RESIDUES	
next date due:	Monthly
# of sub-samples	6/bay

analysis: Finished Product Cont:	
next date due:	monthly
# of sub-samples:	6/bay

OPERATIONAL PROBLEMS

January	None
February	None
March	None
April	None
May	None

June	None
July,	None
August	None
September	None
October	None
November	None
December	None

COMPLAINTS AND ENVIRONMENTAL CONCERNS

January	None
February	None
March	None
April	None
May	None
June	None
July	None
August	None
September	None
October	None
November	None
December	None



**Renewable Sonoma
Quarterly REPORT**

Date

a) Tonnages of Each Material Delivered to Facility

Quarterly

Total tons of organics:	tons
Average tons per day of organics:	tons
Total tons of wood debris:	tons
Average tons per day of wood debris:	tons
Total tons of organics to LTP	tons
Total tons of commercial food discards	tons
Average tons per day of commercial food scraps	tons
Total tons of agricultural materials	tons
Average tons per day of agricultural materials	tons
Tons of amendments	tons
Tons of additive	tons

b) Deviations From Normal Operating Plans

Pile Characteristics

	<u>width</u>	<u>height</u>	<u>length</u>
Mass bed	175	10	90
CASP Piles	33	10	90

Moisture Addition/Application

at grinder:
at compost site:

Moisture Content (%)

by feel:	lab results:
(active compost)	(finished compost)

Additives

None

Temperature Measurements

(data on file at RENEWABLE SONOMA)

Has temperature of finished compost reached 131 degrees Fahrenheit for at least 3 days?	Yes/No

Aeration (turning)

type:	frequency:	Computerized based on compost statistics
Forced Air		

c) Highlights and Anomalies of Program

Weather/Rainfall:		
total inches:		
# of storm events:		
Operational Problems:		
Describe as appropriate		

d) Lab tests

Monthly tests: Nutrient/Pathogen Reduction/Heavy Metals/PESTICIDES/CONTAMIN.

analysis: NUTRIENT	
next date due:	
date sample taken:	
# of sub-samples:	
location of samples:	

analysis: HEAVY METALS	
next date due:	
date sample taken:	
# of sub-samples	
location of samples:	

d) Lab tests

Monthly tests: Nutrient/Pathogen Reduction/Heavy Metals/PESTICIDES/CONTAMIN.

analysis: NUTRIENT	
next date due:	
date sample taken:	
# of sub-samples:	
location of samples:	

analysis: HEAVY METALS	
next date due:	
date sample taken:	
# of sub-samples	
location of samples:	

c) Highlights and Anomalies of Program

Weather/Rainfall:		
total inches:		
# of storm events:		
Operational Problems:		
Describe as appropriate		

d) Lab tests

Monthly tests: Nutrient/Pathogen Reduction/Heavy Metals/PESTICIDES/CONTAMINANTS

analysis: NUTRIENT	
next date due:	
date sample taken:	
# of sub-samples:	
location of samples:	

analysis: HEAVY METALS	
next date due:	
date sample taken:	
# of sub-samples:	
location of samples:	

analysis: PATHOGEN REDUCTION	
next date due:	
date sample taken:	
# of sub samples:	
locations of samples:	

Monthly Test:

analysis: PESTICIDE RESIDUES	
next date due:	
date sample taken:	
# of sub-samples:	
locations of samples:	

analysis: CONTAMINANT IN FINISHED COMPOST

next date due:	
date sample taken:	
# of sub samples:	
locations of samples:	

e) Sales and Distribution of Finished Product

COMPOST/VINEYARD MULCH Sold	total for mont	daily	
monthly total, cubic yards organics sold:	0.00	0.00	cubic yd
cubic yards of screened compost:		0.00	cubic yd
cubic yards of Vineyard Mulch:		0.00	cubic yd
Product donations:		0.00	cubic yd

WOOD MULCH Sold	total for mont	daily	
monthly total cubic yards of wood debris product	0.00	0.00	cubic yd
Path Mulch		0.00	cubic yd
wood debris product donations:		0.00	cubic yd

Energy sold	total for mont	daily	
Cleaned gas			MW

Shipment Log

A shipment log showing date, compost product description, volume and destination of each load leaving the facility is on file at the Renewable Sonoma office and is available for review by the Agency for purposes of verifying end markets and auditing.

f) Complaints and Environmental Concerns

List

Response/explanation/action taken

g) Contaminants Landfilled, Recovered or Recycled

	tons	overall %	tons/day
Residual disposed			0.00
Recycled			0.00

h) Inventory of Tonnage, Volume and Composition of Finished Products

FINISHED MATERIALS cubic yards

unscreened compost	cy
screened compost	cy
mulch	cy
"intermediates"	cy

ACTIVELY COMPOSTING MATERIALS

In CASP	cy
---------	----

FEEDSTOCK

yard/food materials	cy
wood scraps	cy

April 2021

Grand Total		\$	-
--------------------	--	-----------	----------

S: Forms

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Form A
COMMUNICATION PROTOCOL

The Sonoma County Waste Management Agency (SCWMA) commits to a procurement process for Organics Processing Capacity to be open, objective, and carefully monitored. The following rules will be adhered to and enforced.

Until the SCWMA Board of Directors awards the Organic Materials Processing Services Agreement, all contact between participants, participant's sub-contractors, participant's sub-consultants, participant's affiliates, participants lobbyists, legal or political advisors, or any individual or entity that may be assisting the participant in preparing a response to this request for proposals, or providing work to the participant should participant be selected, and SCWMA, shall be in writing, either by email or mail to:

Patrick Carter
Executive Director, Sonoma County Waste Management Agency
2300 County Center Dr., B-100, Santa Rosa, CA 95403
(707) 565-3579
Patrick.Carter@sonoma-county.org

All communications between the SCWMA and a participant, along with the related responses, will be transmitted simultaneously to all participants that have signed into and attended the MANDATORY pre-proposal conference and will be included as part of the evaluation record.

Any participant who fails to recognize or utilize this process of communication will be notified of its violation and may be subject to disqualification from the selection process at the sole discretion of the SCWMA.

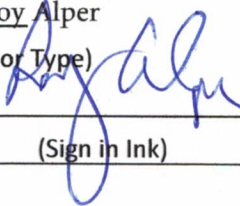
Any attempt to contact or directly interact with any elected or appointed official for the purpose of obtaining information or influencing the Request for Proposal Process, including the selection process, Form A will be grounds for determination of non-compliance and disqualification from the selection process.

All participants must acknowledge and sign this statement as part of the RFP process. All participants must provide a signed **ORIGINAL** of this statement by the close of the **MANDATORY** pre-proposal conference. Participants that do not provide this signed statement will be disqualified from this procurement process.

On behalf of my company/agency, I understand and accept the rules established in this statement.

Company Name: Renewable Sonoma
(Print or Type)

Representative: Roy Alper Title: Owner
(Print or Type)

Signature  Date: June 28, 2017
(Sign in Ink)

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Form A
COMMUNICATION PROTOCOL

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Patrick Carter
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Any attempt to contact or directly interact with any elected or appointed official for the purpose of obtaining information or influencing the Request for Proposal Process, including the selection process, Form A will be grounds for *determination of non-compliance* and disqualification from the selection process.

All participants must acknowledge and sign this statement as part of the RFP process. All participants must provide a signed **ORIGINAL** of this statement by the close of the **MANDATORY** pre-proposal conference. Participants that do not provide this signed statement will be disqualified from this procurement process.

On behalf of my company/agency, I understand and accept the rules established in this statement.

Company Name: Renewable Sonoma
(Print or Type)

Representative: _____ Title: Christine McKernan VP Tech & Dev
(Print or Type)

Signature  Date: 6/22/2017
(Sign in Ink)

Form A
COMMUNICATION PROTOCOL

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Patrick Carter
Executive Director, Sonoma County Waste Management Agency
2300 County Center Dr., B-100, Santa Rosa, CA 95403
(707) 565-3579
Patrick.Carter@sonoma-county.org

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Any participant who fails to recognize or utilize this process of communication will be notified of its violation and may be subject to disqualification from the selection process at the sole discretion of the SCWMA.

Any attempt to contact or directly interact with any elected or appointed official for the purpose of obtaining information or influencing the Request for Proposal Process, including the selection process, Form A will be grounds for determination of non-compliance and disqualification from the selection process.

All participants must acknowledge and sign this statement as part of the RFP process. All participants must provide a signed **ORIGINAL** of this statement by the close of the MANDATORY pre-proposal conference. Participants that do not provide this signed statement will be disqualified from this procurement process.

On behalf of my company/agency, I understand and accept the rules established in this statement.

Company Name: SLS Engineers
(Print or Type)

Representative: _____ Title: Leslie WKACS, Director of Zero Waste
(Print or Type)

Signature



Date: 6/28/2017

(Sign in Ink)

Form A COMMUNICATION PROTOCOL

The Sonoma County Waste Management Agency (SCWMA) commits to a procurement process for Organics Processing Capacity to be open, objective, and carefully monitored. The following rules will be adhered to and enforced.

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Patrick Carter
Executive Director, Sonoma County Waste Management Agency
2300 County Center Dr., B-100, Santa Rosa, CA 95403
(707) 565-3579
Patrick.Carter@sonoma-county.org

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Any participant who fails to recognize or utilize this process of communication will be notified of its violation and may be subject to disqualification from the selection process at the sole discretion of the SCWMA.

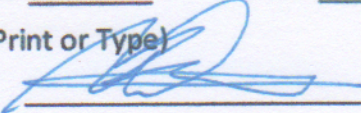
Any attempt to contact or directly interact with any elected or appointed official for the purpose of obtaining information or influencing the Request for Proposal Process, including the selection process, Form A will be grounds for determination of non-compliance and disqualification from the selection process.

All participants must acknowledge and sign this statement as part of the RFP process. All participants must provide a signed **ORIGINAL** of this statement by the close of the **MANDATORY** pre-proposal conference. Participants that do not provide this signed statement will be disqualified from this procurement process.

On behalf of my company/agency, I understand and accept the rules established in this statement.

Company Name: Renewable Sonoma
 (Print or Type)

Representative: Will Bakx Title: Owner
 (Print or Type)

Signature  Date: June 28, 2017
 (Sign in Ink)

Form B
PROPOSER'S STATEMENT OF ORGANIZATION

1. Full Name of Business Concern (Proposer):

Renewable Sonoma LLC

Principal Business Address:

10 Fourth Street
Petaluma, CA 94952

2. Principal Contact Person(s):

Name: Will Bakx Phone Number: 707-240-4222 ext. 5

3. Form of Business Concern:

☐ Corporation ☐ Partnership ☐ Joint Venture Other LLC **X**

4. Provide names of partners or offices as appropriate and indicate if the individual has the authority to sign in name of Proposer. Provide proof of the ability of the individuals so named to legally Bind the Proposer.

Name

<u>Will Bakx</u>	<u>10 Fourth Street Petaluma, CA 94952</u>	<u>Principal</u>
<u>Alan Siegle</u>	<u>10 Fourth Street Petaluma, CA 94952</u>	<u>Principal</u>

A copy of the Agreement governing the signing authority of Will and Alan is provided in Appendix A.

5. If a corporation, in what state incorporated: _____

Date Incorporated: _____
Month Day Year

6. If a Joint Venture or Partnership, date of Agreement: _____

Renewable Sonoma, LLC was formed on August 7, 2017

Form B
PROPOSER'S STATEMENT OF ORGANIZATION

7. List all subcontractors participating in this Organic Materials Processing Services Agreement:

Name	Address
a) <u>SCS Engineers</u>	3843 <u>Brickway Blvd.</u> , Ste. 208, Santa Rosa, CA 95403
b) <u>Engineered Compost Systems</u>	<u>4220</u> 24th Ave. West, Seattle, WA 98199
c) <u>Wiemeyer Ecological Sciences</u>	<u>4920</u> Hansen Drive, Santa Rosa, CA 95409
d) <u>Craig Communications</u>	70 <u>Washington</u> Street, Ste. 425, Oaklnad, CA 94607
e) Matthew Cotton, Integrated Waste Management Consulting	19375 Lake City Rd., Nevada City, CA 95959

8. Outline specific areas of responsibility for each firm listed in Question 7.

a) Engineering, Procurement, and Construction (EPC) prime contractor

b) CASP system design, equipment supply, installation & operations support/training

c) CTS mitigation

d) Community engagement

e) Permitting (AB 1045) and project development support

9. Identify the provisions of any agreement between parties which assigns legal or financial liabilities or responsibilities:

A copy of the Agreement governing the legal and financial responsibilities of each member of Renewable Sonoma is provided in Appendix A.

10. If responding firm(s) are a partially or fully-owned subsidiary of another firm, or share common ownership with another firm, please identify the firms and relationships.

N/A. Renewable Sonoma is 100% owned by Sonoma Compost Company, LLC

A copy of the Agreement governing ownership in Renewable Sonoma is provided in Appendix A.

Form C
CERTIFICATION OF NON-GRATUITIES

TO: THE SONOMA COUNTY WASTE MANAGEMENT AGENCY

CERTIFICATION

This is a written certification, signed under penalty of perjury, stating that no persons acting on behalf of Renewable Sonoma has paid, or offered or attempted to pay, any elected or appointed official, officer or employee of the SCWMA any compensation or consideration, in any form whatsoever, in connection with obtaining or entering into this Organic Materials Processing Services Agreement.

Will Bakx

Name

Principal

Title




Signature

January 12, 2018

Date

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Form D NON-COLLUSION AFFIDAVIT OF PROPOSER and DISCLOSURE OF NON-COMPETE AGREEMENTS	
State of <u>California</u>	County of <u>Sonoma</u> <u>Will Bakx</u> , being duly sworn, deposes and says that:
1. He/She is <u>Principal</u> of <u>Renewable Sonoma</u> , the Proposer that has submitted the attached proposal;	2. He/She is fully informed respecting the preparation and contents of the attached proposal and of all pertinent circumstances respecting such proposal;
3. Such proposal is genuine and is not a collusive or sham proposal;	4. Neither said Proposer nor any of its officers, partners, owners, agents, representatives, employees, or parties in interest, including this affiant, has in any way colluded, connived, or agreed, directly or indirectly, with any other Proposer, firm or person to submit a collusive or sham proposal in connection with the Organic Materials Processing Services Agreement for which the attached proposal has been submitted or to refrain from proposing in connection with such Organic Materials Processing Services Agreement, or has in any manner, directly or indirectly, sought by agreement or collusion or communication or conference with any other Proposer, firm, or person to fix the price or prices in the attached RFP, or of any other Proposer, or to fix any overhead, profit or cost component of the proposal or the response of any other Proposer, or to secure through any collusion, connivance, or unlawful agreement any advantage against The Sonoma County Waste Management Agency or any person interested in the proposed Organic Materials Processing Services Agreement; and
5. The tipping fee proposal in the attached RFP are fair and proper and are not tainted by any collusion, conspiracy, connivance, or unlawful agreement on the part of the Proposer or any of its agents, representatives, owners, employees, or parties in interest, including this affiant.	6. Proposer must list the name of any and all other solid waste service providers and/or affiliates that it has a "non-compete" agreement with that prohibits the other solid waste services provider from proposing on services as requested in this RFP. Failure to disclose this information will result in immediate disqualification from this RFP process.
_____ None. _____ _____ _____ _____	

Form D NON-COLLUSION AFFIDAVIT OF PROPOSER and DISCLOSURE OF NON-COMPETE AGREEMENTS	
	
(Signed)	<u>Principal</u> (Title)
Subscribed and sworn to before me this ____ day of ____, ____.	
_____ Notary Public, State of California	My Commission Expires: _____

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Notary Certificate Attached

MT, 01/04/2018

CALIFORNIA JURAT WITH AFFIANT STATEMENT

GOVERNMENT CODE § 8202

- ☒ See Attached Document (Notary to cross out lines 1-6 below)
☐ See Statement Below (Lines 1-6 to be completed only by document signer[s], *not* Notary)

1 _____
 2 _____
 3 _____
 4 _____
 5 _____
 6 _____

Signature of Document Signer No. 1

Signature of Document Signer No. 2 (if any)

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California

County of Sonoma

Subscribed and sworn to (or affirmed) before me

on this 04 day of Jan, 2018,
 by Date Month Year

(1) Wilhelmus Antonius Bakx

(and (2) _____),

Name(s) of Signer(s)

proved to me on the basis of satisfactory evidence to be the person(s) who appeared before me.



Place Notary Seal Above

Signature Matt McIlroy Tyler
 Signature of Notary Public

OPTIONAL

Though this section is optional, completing this information can deter alteration of the document or fraudulent reattachment of this form to an unintended document.

Description of Attached Document

Title or Type of Document: _____ Document Date: _____

Number of Pages: _____ Signer(s) Other Than Named Above: _____

Form E
ORGANIC WASTE TIPPING FEE PROPOSAL
SUMMARY AND SIGNATURE

In preparing the Tipping Fee Proposal Forms Proposers should be aware of the following:

All organic materials processing tipping fees proposed on these forms for ***Sonoma County Waste Management Agency*** shall be fixed through December 31, 2020 or one (1) year after the Effective Date and should reflect service requirements as specified in the Organic Materials Processing Services Agreement.

The Undersigned hereby certifies as follows:

The Renewable Sonoma-SCS Team
 That _____ have personally and carefully examined the specifications and instructions for the work to be done as set forth in Sections 1 – 6 of this RFP and the Draft Organic Materials Processing Services Agreement (Attachment A or Attachment B).

The Renewable Sonoma-SCS Team
 That _____ have made examination of the services as applicable to the proposal, and fully understand the character of the work to be done.

That, having made the necessary examination, the undersigned hereby proposes to furnish all materials, vehicles, plant, equipment and facilities, and to perform all labor and services which may be required to do said work with the time fixed and upon the terms and conditions provided in the Organic Materials Processing Services Agreement, at the tipping fees set forth on the Tipping Fee Proposal Forms set forth below:

PROPOSER Renewable Sonoma, LLC

President/Partner/Owner Will Bakx, Principal

Secretary Alan Siegle, Principal

Firm Name Renewable Sonoma, LLC

Individual: ☐ Partnership: ☐ Joint Venture ☐ LLC **X**

Corporation _____, A _____ Corporation (State of Incorporation)

A copy of the Agreement governing the signing authority of each member of Renewable Sonoma is attached to Form B.

Signature Instructions:

If business is a CORPORATION, name of the corporation should be listed in full and both President and Secretary must sign the form, OR if one signature is permitted by corporation by-laws, a copy of the by-laws shall be furnished to the SCWMA as part of the proposal.

If business is a PARTNERSHIP, the full name of each partner should be listed followed by d/b/a (doing business as) and firm or trade name; any one partner may sign the form. If the business is INDIVIDUAL PROPRIETORSHIP, the name of the owner should appear followed by d/b/a and name of the company.

If business is a JOINT VENTURE, the full name of each joint venturer should be listed in full and each joint venturer must sign the form, OR if one signature is permitted by the joint venture agreement or by-laws, a copy of the agreement or by-laws shall be furnished to the SCWMA as

Form E
ORGANIC WASTE TIPPING FEE PROPOSAL
SUMMARY AND SIGNATURE

part of the proposal.

Signature:  _____

Will Bakx, Principal

Date January 12, 2018

Signature:  _____

Alan Siegle, Principal

Date January 12, 2018

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Form G PASS/FAIL REQUIREMENTS	
PROPOSER NAME:	<u>Renewable Sonoma, LLC</u> (name of the entity that will sign the Organic Materials Processing Services Agreement in the event one is awarded)
<u>Key Contact Information</u>	
Name:	<u>Will Bakx</u>
Title:	<u>Principal</u>
Address:	<u>10 Fourth Street, Petaluma, CA 94952 707-240-4222 ext.5</u>
Telephone Number:	No fax currently available. We can obtain an e-fax number if truly needed.
Fax Number:	
Required Attachments:	
Each Proposer must include the following attachments in the separate sealed "Pass/Fail Requirements" envelope:	
A copy of Form A Communication Protocol, as completed on the date of the MANDATORY pre-proposal conference.	
A written statement acknowledging receipt of any and all addenda to this RFP document, and a signed copy of each addendum with the date of receipt clearly displayed next to each signature.	
The Proposal Bond of \$25,000.	
A letter from Proposer's bank/financial institution clearly stating that the Proposer has adequate assets and/or irrevocable line of credit that is sufficient to compensate for all required payments to the SCWMA, capital costs, equipment costs, start-up costs, and a minimum of three (3) months' operating costs.	
The Undersigned hereby certifies as follows (initial next to each statement):	
<u>AS</u> <u>WB</u>	The Proposer has attended the MANDATORY pre-proposal conference held on June 28, 2017 at 11:00 a.m. PDT.
<u>AS</u> <u>WB</u>	The Proposer certifies that Proposer has personally and carefully examined the specifications and instructions for the work to be done as set forth in Sections 1 – 6 of this RFP.
<u>AS</u> <u>WB</u>	The Proposer certifies that Proposer has personally and carefully examined the specifications and requirements as set forth in the Draft Organic Materials Processing Services Agreement.
<u>AS</u> <u>WB</u>	The Proposer certifies that Proposer has personally and carefully examined the specifications and requirements of the <i>Sonoma Countywide Integrated Waste Management Plan</i> .
<u>AS</u> <u>WB</u>	The Proposer certifies that Proposer has personally and carefully examined the specifications and requirements of the <i>Sonoma County Waste Management Agency Joint Exercise of Powers Agreement</i> , and all subsequent amendments.
<u>AS</u> <u>WB</u>	The Proposer certifies that Proposer has made an examination of the services as applicable to

Form G
PASS/FAIL REQUIREMENTS

the proposal, and fully understands the character of the work to be done.

AS W3 The Proposer warrants that the requirements of the Draft Organic Materials Processing Services Agreement as described in this RFP, its enclosures, and all addenda have been thoroughly reviewed and the Proposer has conducted all due diligence necessary to confirm material facts upon which the proposal is based.

AS W3 (For long-term Agreements only) The Proposer agrees to submit a **Performance Bond** in the amount of **One Million Dollars (\$1,000,000)** effective within ten (10) calendar days from the date the SCWMA Board approves the Agreement(s).

AS W3 The Proposer acknowledges the validity of the proposal contents, including proposed Organic Materials Processing Tipping Fees and pricing for a period of one hundred eighty (180) days from the proposal due date.

Having made the necessary examination, the undersigned hereby proposes to furnish all materials, vehicles, plant, equipment, and facilities, and to perform all labor and services which may be required to do said work within the time fixed and upon the terms and conditions provided in the Organic Materials Processing Services Agreement, at the tipping fees set forth on Form F:

PROPOSER NAME Renewable Sonoma, LLC
(name of the entity that will sign the Organic Materials Processing Services Agreement)

President/Partner/Owner Will Bakx

Secretary Alan Siegle

Firm Name Renewable Sonoma, LLC

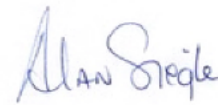
Individual: ☐ Partnership: ☐ Joint Venture: ☐ LLC ☒

Corporation _____, A _____ Corporation (State of Incorporation)

Signature _____



Signature _____



Date January 12, 2018

Will Bakx

Date January 12, 2018

Alan Siegle

Signature Instructions:

If business is a CORPORATION, name of the corporation should be listed in full and both President and Secretary must sign the form, OR if one signature is permitted by corporation by-laws, a copy of the by-laws shall be furnished to the SCWMA as part of the proposal.

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If business is a JOINT VENTURE, the full name of each joint venturer should be listed in full and each joint venturer must sign the form, OR if one signature is permitted by the joint venture agreement or by-laws, a copy of the agreement or by-laws shall be furnished to the SCWMA as part of the proposal.