

**Meeting at:**

**Kosair Shrine Center**

**4120 Bardstown Road**

**Louisville, Kentucky 40218**

**May 6, 2020**

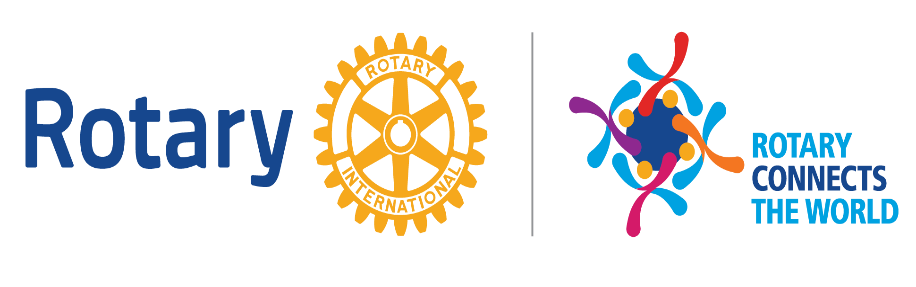
**Business Plan**

**for**

**Community Disinfectant Project**

**The Rotary Club**

**of Louisville Suburban**



**Foreword**

The Rotary Club of Louisville Suburban Club (Club) is initiating a project to make disinfectant that will be used by members in the community to disinfect surfaces from the Coronavirus (Covid-19). This project will distribute diluted bleach as a disinfectant carefully produced, stored and distributed because of the caustic nature of ingredients and electrical equipment used to produce the disinfectant. Due to this, organized control has been placed on the project and the production using this document for guidelines with the production, storage and distribution of the disinfectant product and the funds from the Club used to finance the project. The officers and committee members have examined this document and understand the project and processes of the effort for the Club and agree with oversight to ensure the project is successful.

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Alan Morgan May 1, 2020

President

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John Mills May 1, 2020

Vice President and President Elect

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

Neil Watkins May 1, 2020

Treasurer

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

Don Gosser May 1, 2020

Secretary

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

Michael Parker May 1, 2020

Director and Rotary Foundation Chair

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| **Document Control** | | |
| Please contact Michael Parker if there are errors, additions or changes needed for this document. | | |
| **Date** | **Edit or Change** | **Person** |
| 4/25/20 | New document | Mike King |
| 5/7/20 | 1st Draft Edits | Mike King |
|  |  |  |

**SECTION 1.0 INTRODUCTION AND BACKGROUND.**

This section introduces the Rotary Club of Louisville Suburban Community Disinfectant Project.

**1.1 Introduction.** The Rotary Club of Louisville Suburban (Club) is a member of Rotary International meeting every Wednesday at Kosair Shrine Center, 4120 Bardstown Road, Louisville, Kentucky 40218.

**1.2 Purpose of Document.** The primary purpose of this document is to outline the details of the community disinfectant project to ensure effectiveness and funding appropriateness for the project and Club. Other purposes for this document include having:

* Documentation to help other Rotary Clubs or organizations start their own project efforts to create disinfectants for their community.
* Processes and instructions documented and ready if a quick restart of another disinfectant project is needed in the future.
* A document format that can be modified for other community projects if needed.

**1.3 Community Disinfectant Project for Club.** The outbreak of the Coronavirus has created the need to disinfect surfaces that may have been exposed to a source of the virus that could then infect a person. Due to this there is a high demand and need for chemicals to be used as a disinfectant. However, stores and commercial distributors of disinfects are impacted by a high demand from consumers causing a shortage and availability of disinfectants. In addition, many individuals and public organizations who can be affected by the virus and need disinfectants have minimal budgets to pay for them or immediate access due to shortages. Based on this situation the Club has pursued a project to produce a disinfectant that is inexpensive and available to those in need in the community. The concepts and planning for this project fits the purpose, objectives and avenues of the Club to justify the costs and efforts of this project. The purposes and avenues follow.

**1.4** **Club Purpose.** The purposes of this Club are to pursue the Object of Rotary, carry out successful service projects based on the Five Avenues of Service, contribute to the advancement of Rotary by strengthening membership, support The Rotary Foundation, and develop leaders beyond the club level.

**Object.** The Object of Rotary is to encourage and foster the ideal of service as a basis of worthy enterprise and in particular to encourage and foster:

* **First.** The development of acquaintance as an opportunity for service.
* **Second.** High ethical standards in business and professions; the recognition of the worthiness of all useful occupations; and the dignifying of each Rotarian’s occupation as an opportunity to serve society.
* **Third.** The application of the ideal of service in each Rotarian’s personal, business, and community life.
* **Fourth.** The advancement of international understanding, goodwill, and peace through a world fellowship of business and professional persons united in the ideal of service.

**Five Avenues of Service.** Rotary’s Five Avenues of Service are the philosophical and practical framework for the work of this Rotary club.

**1. Club Service.** The first Avenue of Service involves action a member should take within this club to help it function successfully.

**2. Vocational Service.** The second Avenue of Service has the purpose of promoting high ethical standards in businesses and professions, recognizing the worthiness of all dignified occupations, and fostering the ideal of service in the pursuit of all vocations. The role of members includes conducting themselves and their businesses in accordance with Rotary’s principles and lending their vocational skills to club-developed projects in order to address the issues and needs of society.

**3. Community Service.** The third Avenue of Service comprises varied efforts that members make, sometimes in conjunction with others, to improve the quality of life of those who live within this club’s locality or municipality.

**4. International Service.** The fourth Avenue of Service comprises those activities that members do to advance international understanding, goodwill, and peace by fostering acquaintance with people of other countries, their cultures, customs, accomplishments, aspirations, and problems, through reading and correspondence and through cooperation in all club activities and projects designed to help people in other lands.

**5. Youth Service.** The fifth Avenue of Service recognizes the positive change implemented by youth and young adults through leadership development activities, involvement in community and international service projects, and exchange programs that enrich and foster world peace and cultural understanding.

**1.5 Goals of Project.** The primary goals of the project include:

* Acquiring and setting up the equipment, material and process for producing disinfectant.
* Producing disinfectant in various quantities and concentrations as needed.
* Distributing disinfectants to identified organizations who need it.

Each of the primary goals has operational costs, planning and resource tasks to complete them and address the needs of the community as shown in Section 4.

**1.6 Risks of Project.** As with all business and project efforts, there are risks and mitigations for the risks to ensure that the project achieves the goals and objectives planned for the efforts. The identification of risks leads to decision factors including: Do you proceed with the project? How long do you proceed? When do you stop? What needs to be done to alleviate the risk? Is the cost feasible? The following table is a risk table used to track risks and outcomes.

| **#** | **Risks** | **Impact** | **Mitigations** |
| --- | --- | --- | --- |
| 1 | Legal Liability of the Disinfectant Product Made from Bleach. This comes from ingestion of a product made from bleach or splashing in eyes, accusation that the product was ineffective, illegal production, etc. | Club lawsuit. | * Verify or purchase insurance a policy. * Set standards and detailed instructions, labels, inventory tracking, and quality control records for control. * Maintain customer lists for tracking of batches and consumers. * Use label developed by WaterStep. |
| 2 | Reduced Demand. The Coronavirus seems to be dissipating as of June 1, 2020. When the virus reaches non-pandemic levels there may not be as much need for disinfectant. | Disinfectant not needed. | * Need to decide estimated decline date before producing Disinfectant and allow the reduction of demand to stop Rotary Club production. * Maintain minimal inventory. |
| 3 | Competition and Other Sources. Many organizations are now geared up to produce disinfectants. | Disinfectant is no longer needed. | Need to make sure there are identified customer and outlets before proceeding. |
| 4 | Overproduction and Expiration. As virus recedes there may be a too much leftover disinfectant product. | Costly waste | Produce disinfectant based on known demand from consumers. |
| 5 | Equipment No Longer Used After Project. Project has no future use. | Wasted equipment and funds. | Keep equipment ready for future or donate back to WaterStep or another organization. |
| 6 | Lack of Customers. All those who need disinfectants may now have access. | Disinfectant not needed | Need to make sure consumers are identified. |
| 7 | Project Failure. Funds and effort not successful. | Waste | Make sure there is a “go-no go” decision and exit strategy. |
| 8 | Lack of Staff Resources. Not enough volunteers to produce/deliver in long term. | Can’t reach demand | Limit production to available resources. Recruit from outside if needed. |
| 9 | Stolen or Broken Equipment. Would have to replace with additional funds. | New funds needed. | Keep equipment safe and only used by trained persons. |
|  |  |  |  |

**1.7 Reference Information.** The primary sources of information and materials for the project are shown on the following table. comes from

|  |  |  |
| --- | --- | --- |
| **#** | **Source** | **Subject** |
| 1 | WaterStep | <https://waterstep.org/combating-covid-19> |
| 2 | Electrolytic Technologies, About Bleach Production | https://electrolytictech.com/applications/bleach-production/ |
| 3 | CNN, Disinfectant Shortages | https://www.cnn.com/2020/04/29/politics/lysol-wipes-back-in-stores-when-disinfectant-sprays/index.html |
| 4 | WaterStep | <https://waterstep.org/bleachmakerinfo/> |
| 5 | WaterStep | <https://waterstep.org/> |

**1.8 Questions About the Project.** Any questions about the project, volunteering or requests for disinfectant should be sent to Michael Parker or by emailing [rotarycluboutreach@gmail.com](mailto:rotarycluboutreach@gmail.com).

**1.9 Disinfectant Composition.** The disinfectant is comprised of water and salt that undergoes electrolysis to produce bleach and is then diluted with additional water to a 1:9 ratio to become a disinfectant. The outcome of this process is a disinfectant that is used to clean surfaces that may have been contaminated with the Coronavirus.

**SECTION 2.0 MANAGEMENT OF THE PROJECT.**

This section outlines how the project effort is managed.

**2.1 Project Manager.** The person in charge of directing and ensuring that all aspects of the project are completed and maintained is Michael Parker.

**2.2 Resources and Volunteers.** Some of the resources and volunteers directly involved with the activities of the project are shown on the following table. Other members of the Club also involved in the project have their contact information listed on the DACdb Club website. A detailed list of volunteers is also kept separately from this document by Michael Parker and Therese Crumes.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **#** | **Person** | **Phone Number** | **Email** | **Volunteer Duties** |
| 1 | Michael Parker | 502-413-1890 | mkparker@firstcommand.com | Project Manager  Disinfectant Producer |
| 2 | Neil Watkins | 502-544-2804 | neilwatkins20@gmail.com | Treasurer  Disinfectant Producer |
| 3 | Mark Hogg | 643-0939 | mark.hogg@waterstep.org | WaterStep Contact and Advisor |
| 4 | Therese Crumes | 502-645-0093 | tcrumes@msn.com | Volunteers |
| 5 | Greg Heitzman | 502-533-5073 | gheitzman@yahoo.com | Labels |
| 6 | Allan Morgan | 256-653-6403 | allan.morgan@scouting.org | President |
| 7 | John Mills | 502-523-7562 | onebillsfan66@yahoo.com | Vice President |
| 8 | Don Gosser | 502-643-1737 | dongosser@twc.com | Secretary |
| 9 | Mike King | 502.548.6821 | Mrfking001@gmail.com | Documentation |
| 10 | Mark Wilson | 502-551-9619 | mark.wilson@mwarep.org | Grant Acquisition |
| 11 | AW Buie | 907-460-8820 | anthonyawbuie@gmail.com | Consumer Contact |
| 12 | TBD |  |  | Delivery |
| 13 | TBD |  |  | Delivery |
| 14 | TBD |  |  | Delivery |
|  |  |  |  |  |

**2.3 Associates and Vendors.** The associates and vendors for the project are outside entities that provides assistance, information or products to the Club. The following lists key associates and vendors.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **#** | **Organization** | **Person** | **Phone** | **Email** | **Item** |
| 1 | WaterStep | Mark Hogg | 502.643-0939 | mark.hogg@waterstep.org | Contact, Advisor |
|  | Modern Woodmen of America | Mark Wilson | 502.551.9619 | mark.wilson@mwarep.org | Grant Acquisition |
| 2 | Lowes | Any Location |  |  | Spray bottles, Gerry Cans |
| 3 | GFS | Any Location |  |  | Salt |
| 4 |  |  |  |  |  |

**2.4 Disinfectant Project Liability and Insurance.**  The liabilities for the project are being identified as the project matures. The risks that cause liabilities have mitigations steps to alleviate the impacts on the Club. One of the mitigations is an insurance policy that provides protective coverage in the event of a lawsuit. At this time the Club has insurance coverage is from the U.S. Clubs & Districts Liability Insurance Program.

**2.5 Disinfectant Making Equipment and Materials Funding and Costs.** The disinfectant making equipment and materials for the project and costs are paid for from various sources. These include:

* A grant given to WaterStep from Modern Woodmen of America to provide at least two disinfectant makers to the Club for use with this project. The disinfectant makers will be returned to WaterStep after this project has been completed and the predicted recurrence of Covid-19 in the Fall of 2020.

The generosity of the Modern Woodmen of America provided a $1000 grant to WaterStep for the disinfectant makers being used by Rotary with the remaining funds used by WaterStep to provide disinfectant makers to other organizations to fight Covid19 as well.

Special thanks are given to Mark Wilson, District Agent for Modern Woodmen of America and Rotary Club of Louisville Suburban club member for acquiring the grant given to WaterStep that supports the Community Disinfectant Project.

* The Club will make donations to pay for materials and supplies needed to produce the disinfectant. This may include salt, bottles, labels and other incidental items.
* Club Volunteers and Other Donors may also supply materials and production facilities to produce and distribute the disinfectant. This includes the start-up, resupply and recurring production items that will be needed to maintain and sustain production. These materials may be donated, reimbursed or provided through “in-kind” giving to the organization.

There may be other grants and donations from outside organizations given to the Club for the project as it progresses. All costs, reimbursements and donations for the project will be recorded and maintained.

**2.6 Disinfectant Value, Normal Sales Price and Free Distribution.** The production of the disinfectant has a break-even cost to the Club so a value for the product can be determined. There are three distribution strategies that can be used for the disinfectant product which include: being free; sold at a break-even price or sold at a profit price that is plowed back into production. The sales price strategy helps determine what funds may or may not be received from the production and distribution.

Free Disinfectant Strategy. At this time the Rotary Club pricing strategy is that the disinfectant product will be donated free to those in the community in need of disinfectant but may not have access or funds to make that purchase. The production costs for the disinfectant is listed in Section 4.

**2.7 Start-Up Items.** The start-up items are minimal with most readily available at no cost. These include the bleach makers, tables, water, electricity are readily available. Supplies to make the disinfectant will need to be purchased. The items to support production and produce disinfectant are listed in Table 4.5 - Estimated Cost Table.

**2.8 Ordering Materials.**  Some items will need to be purchased and replenished or restocked later to continue production. These items are listed in the cost table. The sources to reorder the items is shown in the Materials Specifications table in Section 4.3.

**2.9 Project Activities and Scheduling.**  The project efforts will require different activities and schedules that will be documented for resources volunteering with the project. These efforts include:

* Disinfectant production.
* Supplies pickup.
* Delivery of product to customers.
* Pickup of product at a location by customers.

**2.10 Disinfectant Production Locations.** The production location for the disinfectant will be at the following:

Michael Parker

5213 Pebble Creek Place

Louisville, Kentucky 40241

502.413.1890

Neil Watkins

3303 Oriole Drive

Louisville, Kentucky 40213

502.544.2804

**2.11 Disinfectant Production Persons.** The person or persons who have been trained and are responsible for the production of the disinfectant are shown in Table 2.2.

**2.12 Production Volunteers.** The volunteers that scheduled to help with the production are shown in Table 2.2. In addition, a separate list will be maintained for other volunteers as the project progresses.

**2.13 Production Quantity.** The determination for production is assessed by those working directly with potential customers and their demand requests. The general amount of production will use a “just in time” production approach as the disinfectant is only viable for two weeks after production.

**2.14 Storage of Disinfectant Product.** The production storage location for the disinfectant will be the same as the Production Location.

**2.15 Equipment and Materials Storage at Shutdown.** When it is decided that production can be stopped, the equipment is shut down, cleaned and stored or donated back to WaterStep. The other items left over from production e.g. bottles and other materials can be stored, discarded or donated to WaterStep or another organization. Most of the start-up items can be stored for future use if needed. The future use may be the reoccurrence of the Coronavirus pandemic or another potential community use.

**SECTION 3.0 MARKETING AND DISTRIBUTION.**

This section outlines the marketing and distribution of the disinfectant products.

**3.1 Marketing and Advertising.** One of the reasons why most businesses and small projects fail is due to the lack of marketing or advertising to identify customers. This means that if the disinfectant project from the Club is going to be successful there must be identified customers who will need the disinfectant on an ongoing basis. Due to this there needs to be an organized effort to identify who the customers will be for the disinfectant. What is often not realized by those involved with a project is, the product is easier to produce than it is to find appropriate customers and distribute the product.

**3.2 Current Marketplace.** There are many people and organizations in the community who need disinfectants for the Coronavirus. However, some considerations are needed before the potential customers are identified. These include:

* At the beginning of the Coronavirus crisis there was a “run” on disinfectants in stores and distribution centers. There created a shortage leading to the demand for substitutes that could still have the same disinfecting capabilities. This provided opportunities for distilleries and companies like WaterStep to fill the shortage. Many manufacturers of disinfectants geared up to address the demand and restock the store and distribution locations. The outcome of this is that the demand for many in the community is being met commercially and the demand for smaller production location has been reduced. The lifecycle of the demand for disinfectants will be moving to a downward slope by June 1,2020.
* Many larger organizations that need larger quantities of disinfectants have already sought out their distributing source or are making their own using materials e.g. disinfectant makers from WaterStep. These organizations needed the disinfectant immediately and in an inexpensive format. So, they came up with a process to create their own.
* Some of the organizations that began creating their own disinfectants were able to produce enough disinfectant and other disinfectants to be given away to those in their immediate community.
* Due to the short-term expiration of two weeks, the amount of disinfectant produced should closely equal the demand in a “just in time” process. This will reduce production efforts; storage needs and expiration discards.
* The most effective distribution is through a community organization versus individuals.
* Some locations are overstocking so they are having a lot of discards for donated disinfectants.

**3.3 Identifying Customer.** There are many people in the community who need disinfectants to clean areas that may be infected with Coronavirus that may not have access to available supplies. These are the type of customer that need to be identified by the Club to begin production and distribution of the disinfectant. Some of the criteria include:

The customer should not be:

* On the WaterStep list of companies who purchased the disinfectant makers.
* A large organization who is able to purchase and stock disinfectants.
* An organization that is already receiving disinfectant donations.
* Affluent with the means and sources to get disinfectants easily.

The customer should:

* Have a need for disinfectants.
* Be at a location that is accessible.
* Be a community outlet that individuals can come to for disinfectant.
* Be in an economic position where they have difficulty acquiring disinfectant.

Phone calls and emails will be used to contact potential customers that have been identified.

**3.4 Disinfectant Customer Distribution List.** A list needs to be created based on identifying customers for the disinfectant. The list needs to include the following information. The actual list is maintained outside this document in an Excel spreadsheet.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **#** | **Organization,**  **Address** | **Contact Name,**  **Phone Number** | **Quantity Needed** | **Delivery and**  **Replenish Dates** |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

**3.5 Disinfectant Product Pickup or Delivery.** The disinfectant product may be picked up at a production location or delivered to the customer. This will need to be determined when identifying the customer. There are pros and cons for having the product picked up or delivered. In most cases, it is preferred to deliver the disinfectant.

If picked up, it is recommended that the pickup point is not at a person’s home but instead at an easy to fine location that is open to the public e.g. Kosair Shrine Center parking lot. If delivered, this will require more effort and manpower and care will be needed about where the delivery point is located. It is recommended that a public location be used for the product transfer e.g. church.

Arrangements for delivery need to be made at the time of request to ensure someone will be there to receive the product from the volunteer delivering the disinfectant. The disinfectant containers need to be delivered in a box or bag to prevent spillage.

Club Delivery Preference. The Club approach for distributing the disinfectant is to deliver the disinfectant spray bottles to a customer location in boxes. At the time of delivery any of the previously delivered spray bottles that are returned empty will be swapped for one that if full. The empty bottles will be returned to the production site to be refilled and returned to a customer site at a following delivery. It is expected that many of the empty spray bottles will not be returned for refilling. Due to this there will need to be a continual resupply for the 32 oz spray bottles.

At this time the planned delivery days will be on Tuesday and Thursday.

**3.6 Delivery Letter.** A delivery letter has been created that is given to the recipient of the disinfectant at the time of delivery. The letter outlines what the product is with instructions, shelf life and the refilling process. An example of the letter is shown at the end of this document. The letter may be changed from time to time as processes change as wells as the conditions of the Coronavirus pandemic.

**SECTION 4.0 FUNDING, COSTS AND PRICING.**

This section outlines the funding, costs and pricing information for the project.

**4.1 Funding for Project.** The following table outlines the funding for the project. The source, amount and responsible party is listed for each.

|  |  |  |  |
| --- | --- | --- | --- |
| **#** | **Organization** | **Donation** | **Estimated**  **Amount** |
| 1 | Modern Woodmen of America | Grant to WaterStep for disinfectant makers | $1000 |
| 2 | WaterStep | Two disinfectant maker kits loaned to Rotary | N/C |
| 3 | Rotary Club of Louisville Suburban | Materials and items to produce disinfectant | TBD |
| 4 | Other Donations | Funds to purchase supplies | TBD |
| 5 | Volunteer “In Kind” | Production locations, production and delivery | TBD |

The estimated funding received for the project will be determined when the project is concluded and all details tallied.

**4.2 Cost Items.**  A cost item is any item that requires a payment of some type to a vendor or supplier including reimbursements and “in-kind” donations that help with production and distribution of the disinfectant product. “In-kind” items need to have price identified to determine the value of the product. There are two types of costs that help determine the overall cost of the project and value of the product. These are:

* Start Up and Initial Costs**.** The start-up and initial costs are those that should be a one-time cost to set up the equipment and facility to produce the disinfectant.
* Production Cost**.** The production costs are those required for materials to produce the disinfectant as well as replacements for equipment and production materials.

**4.3 Production Materials Items, Vendors and Estimated Costs.** The materials, suppliers and estimated costs used for disinfectant production are shown on the following table.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **#** | **Item and Specification** | **Vendor Source** | **Quantity** | **Cost Each** |
| 1 | Salt | GFS | As needed | $7.79 |
| 2 | Spray Bottles, 32 oz | Lowes | As needed | 2.95 |
| 3 | Gallon Bottles | Lowes | As needed | 2.15 |
| 4 | Sure Can 5 Gallon | Lowes | As needed | 49.99 |
| 5 | 5 Gallon Container and Lid | Lowes | As needed | 5.38 |
| 6 | Labels for Spray Bottles | WaterStep | 180 per order | 1.39 |
| 7 | Labels for Gallon Jugs (Same as Spray Bottles) | WaterStep | N/A | N/A |
| 8 | Boxes to Carry Product | Donated and Discarded | As needed | N/A |
| 9 | Bags to Carry Product | Recycled bags | As needed | N/A |
| 10 | Safety Glasses | Lowes | As needed | 6.97 |

**Comment:** Some costs of the materials and equipment shown in the following table are estimates to give an estimate and value to the disinfectant product that is provided to the community. A more accurate disinfectant production costs will be determined as the project progresses and at the end when all details can be calculated.

**4.4 Estimated Costs Table.** The following table contains the cost items for the Club disinfectant project. Note there are two locations for production so there are two sets of production setup items and materials.

| **#** | **Item** | **Vendor** | **Description** | **Qty** | **Each** | **Total Cost** |
| --- | --- | --- | --- | --- | --- | --- |
| **1.0** | **Start Up/Initial Costs** |  |  |  |  |  |
| 1.1 | Disinfectant Maker Kit | WaterStep | Start Up Kit | 2 | $450 | N/C |
| 1.1.1 | Generator Electrode | WaterStep | In Kit. | 2 |  |  |
| 1.1.2 | Connector Cables | WaterStep | In Kit. | 2 |  |  |
| 1.1.3 | Blue Funnel | WaterStep | In Kit. | 2 |  |  |
| 1.1.4 | Measuring Cups, Spoons | WaterStep | In Kit. | 2 |  |  |
| 1.1.5 | One 5 liter Jerry Can | WaterStep | In Kit. | 2 |  |  |
| 1.1.6 | Safety Glasses | WaterStep | In Kit. | 2 |  |  |
| 1.1.7 | Chlorine Test Kit | WaterStep | In Kit. | 2 |  |  |
| 1.1.8 | Three 1 cc Syringes | WaterStep | In Kit. | 6 |  |  |
| 1.1.9 | Sample Salt Bag | WaterStep | In Kit. | 2 |  |  |
| 1.1.10 | 1 liter measuring cup | WaterStep | In Kit. | 2 |  |  |
| 1.1.11 | Instruction Manual | WaterStep | In Kit. | 2 |  |  |
| 1.2 | Power Supply, WaterStep or Battery Charger | Producer Provided | Using Battery Trickle Chargers | 2 |  | N/C |
| 1.3 | 1 Gal. Containers | Walmart | Spout and markings | 4 | 10.50 | 42.00 |
| 1.4 | 5 Gallon Sure Can Dispenser | Lowes | Disinfectant Dispensing Container | 2 | 49.99 | 99.98 |
| 1.5 | Salt Holding Container | Lowes | 5 gallon bucket | 2 | 5.38 | 10.76 |
| 1.6 | Safety Glasses (extra) | Lowes | If needed | 2 | 6.79 | N/C |
| 1.7 | Electric Extension Cord | Producer | Available | 2 | N/C | N/C |
| 1.8 | Electrical Source | Producer | Available | 2 | N/C | N/C |
| 1.9 | Water - Hose or Source | Producer | Available | 1 | N/C | N/C |
| 1.10 | Table | Producer | Available | 1 | N/C | N/C |
| 1.11 | Log Pen and Marker | Donor | Available | 2 | 2.00 | 4.00 |
| 1.12 | Insurance Cover |  |  | 1 | N/C | N/C |
|  |  |  | **Sub Total** |  |  | **$156.74** |
| **2.0** | **Production Materials** |  |  |  |  |  |
| 2.1 | Salt | GDS | 25 lb. bags | 2 | $7.79 | 15.58 |
| 2.2 | Water | On Tap | Tap water | -- | -- | N/C |
| 2.3 | Product Safety Labels | Waterstep | Ernies Print Shop | 180 | 1.39 | 250.00 |
| 2.4 | Jug, Gal (128 oz), caps per customer order | Cary Company | Caps-0.15, Jug-2.00 | N/A | N/A | N/A |
| 2.5 | 32 oz. Spray Bottle | Lowes | $3.28/military discount = $2.95 | 55 | 2.95 | 162.25 |
| 2.6 | Packing Boxes | Donated | Recycled |  | N/C | N/C |
| 2.7 | Packing Bags | Donated | Recycled |  | N/C | N/C |
|  |  |  | **Sub Total** |  |  | **$427.83** |
|  |  |  | **Estimated Total** |  |  | **$584.57** |

**4.5 Product and Pricing Table.** The following table shows the pricing for the various product levels.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **#** | **Item** | **Description** | **Est. Cost Each** | **Est. Value Each** | **Markup** | **Price Each** |
| 1 | Spray Bottle, 32 oz | Concentration 1:9 | TBD | $4.00 | 0% | Free |
| 2 | Gallon Jug #1  (If requested) | Concentration 1:9 | TBD | TBD | 0% | Free |
| 3 | Other | Special Request | TBD | TBD | 0% | Free |

**4.6 Images of Disinfectant Makers and Spray Bottles.**  The following images show the Bleach Maker kit and the disinfectant spray bottles.



**Bleach Maker Kit.**

**The power supply in upper right corner not used.**



**Bleach Maker Kit.**



**32 oz Spray Bottles with Disinfectant**

**SECTION 5.0 SETUP AND PRODUCTION.**

The section outlines the operational management of the disinfectant production.

**5.1 Training and References.**  Training for the production of the disinfectant will be provided to some of the Rotary production personnel at WaterStep. Those persons will then train others from the Rotary Club. In addition, there are video training sessions and other on-line material that will provide training for production of the disinfectant. The detailed disinfectant making instructions are located on the 5 liter bottle provided with the kit. The Disinfectant Maker Setup and Operation video is an excellent presentation on making the disinfectant and should be watched as an instructional training guide from the WaterStep website. The WaterStep internet links include:

[**https://waterstep.org/bleachmakerinfo/**](https://waterstep.org/bleachmakerinfo/)

[**https://waterstep.org/combating-covid-19/**](https://waterstep.org/combating-covid-19/)

**5.2 Disinfectant Production Location.** There are two production locations that need to be coordinated for making and storing the disinfectant. Michael Parker, the Project Manager, will determine how much disinfectant needs to be made, the customers who will receive the disinfectant and where the disinfectant will be made. The amount of materials and supplies available at each location will determine where the bleach is made and diluted to become disinfectant.

**5.3 Amount of Bleach and Disinfectant for Production Runs.** The amount of bleach and disinfectant to be produced per production run will be pre-determined based on the estimated demand and usage from a consumer or groups of people at a delivery site. A volunteer from Rotary will contact each delivery site to ask about the amount of disinfectant they need to be produced. This may include swapping out empty containers for ones that are filled.

**5.4 Bleach Making, Formula, Dilution and Disinfection Production Amount Measurements.** The bleach formula, dilution for the disinfectant and production amounts follow.

**32 oz Disinfectant Spray Bottles.**

* The disinfectant spray bottles are measured for 32 oz. (roughly 1 liter).
* 1 liter is equal to 34 ounces (oz.).

**Bleach Maker.**

* The bleach making container holds 5 liters of water or bleach after electrolysis (170 oz.).

**Dilution Ration.**

* The dilution ratio for the disinfectant is 1:9 (1 part bleach/ 9 parts water).
* Diluting 5 liters of concentrated bleach with 40 liters water produces a 1:9 ratio of bleach to water.
* The total amount of 1:9 ratio bleach to water production is approximately 45 liters of disinfectant.
* 45 liters of disinfectant is approximately 12 gallons.
* 45 liters of disinfectant will fill 45 spray bottles.

**Diluting the Bleach**.

* The Sure Can container cannot be used to dilute the entire batch of concentrated bleach.
* The Sure Can container used for mixing and dispensing holds 5 gallons in size or about 19 liters.
* To dilute the bleach using the Sure Can container, three dilution processes will need to occur.
* Place 1.7 liter (58 oz) of concentrated bleach into Sure Can Container.
* Add 13.6 liters (460 oz) of water to change the bleach to a disinfectant.
* The amount of disinfectant will fill 15 spray bottles each time.
* Three dilution processes will fill 45 spray bottles.

**5.5 Equipment Setup.** The equipment setup is not complicated and uses a table that will hold the jugs, containers and disinfectant making equipment. The overall setup is to:

* Set up a sturdy table recommended to be 4’ x 8’.
* Have a fan blowing to clear out any fumes to the outside.
* Plug heavy duty extension cord to power source / outlet.
* Plug bleach maker power supply into heavy duty extension cord.

**5.6 Materials Preparation.** The materials preparation includes setting out all items needed for production. This includes the measuring containers, jugs, salt, syringes, chlorine tester, etc. on the table. Production of products where measurements, dilutions and container filling occur often have errors if the production information and material setup is not known and ready to completed the process. The items prepared prior to the production run include:

* The number of containers to be filled up should be determined.
* The container sizes to be filled up should be selected.
* The concentrations of disinfectant filling each container should be determined.
* The salt and water should be measured for the batch.
* The Production Log should be filled out.
* Labels to be filled out.
* Chlorine tester ready.
* Boxes for finished product.

**5.7 Disinfectant Product Production and Packaging.** When ready to produce the disinfectant the concentration, containers and labels should be prepared and ready for use. Prior to the disinfectant making process the Production Log should have the appropriate information placed in it for tracking. An example of the Production Log follows.

**5.8 Disinfectant Production Log.**  The first step in making the disinfectant is to enter the production run in to the log for tracking the production of the disinfectant. The example is shown below. There are actual separate log sheets for use during production. below. The reasons for maintaining this log include:

* Should there be a problem with some of the disinfectant produced it provides an audit trail back to the production so the problem can be determined and resolved.
* For the consumers it will give public confidence in the product they are receiving that it has been made correctly and tracked for delivery.
* Should there be a legal complaint, it will provide documentation that the disinfectant being produced followed a set of procedural guidelines that ensured the product was compliant with the standards for the disinfectant.
* It will assist with inventory control for resupply purposes and cost tracking.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Rotary Club of Louisville Suburban – Disinfectant Project – Production Log** | | | | | | | |
| **Batch #** | **Date Produced** | **Date to Expire** | **Production Person** | **Location** | **Concentration and Container** | **Qty** | **Consumer and Delivery Date** |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |

**5.9 Disinfectant Quality Control and Testing.** A chlorine test kit supplied with the Bleach Maker Kit is used to test the strength and quality of the disinfectant that is produced. The instructions for using the test kit are located on the kit container. In addition, the training video from WaterStep should be viewed to see how the testing process should be done.

**5.10 Disinfectant Product Labels.** The product labels have important information on them for the consumer receiving the disinfectant. Each label is required to be marked with the “born on date” (when it was made) and the expiration date. In addition, the person producing the disinfectant should put their initials under the expiration date for tracking purposes.

It is recommended that the labels should have the production information filled out with a permanent marker before placing on the bottle. And, the labels should also be placed on the bottles before filling with disinfectant to ensure they will stick appropriately. (If the bottles get moist during filling from spillage or sweating due to humidity the labels may not stick). An example of a label follows.



**5.11 Disinfectant Storage.** There is limited amounts of disinfectant that can be produced at a time. Due to this, amounts of disinfectant may be produced before distribution and stored until distributed. The disinfectant that is stored should be kept secure due to the causticness and away from the heat or cold that could damage the containers or diminish the strength of the disinfectant.

**SECTION 6.0 STORAGE OF MATERIALS AND DISINFECTANT PRODUCT.**

This section outlines the storage of the disinfectant ready for distribution.

**6.1 Disinfectant Storage.** After disinfectant has been produced it may be stored in containers in a variety of sizes and concentrations that will be ready for public use. The Club has selected 32 oz spray bottles for consumer use. The filling of the containers and dilution process occurred during the production process. All containers received the appropriate identifying labels at the time of production as well as the batch run information for tracking.

The finished disinfectant products should be stored where they cannot be damaged, out of excessive heat or cold and in “like” size and concentrations.

**6.2 Inventory.** The amount of each size and concentration of the disinfectant products needs to tracked for distribution and expiration. This is important so that when an order is placed or a pickup occurs the requested size and concentration is known and available for delivery. If it will not be available a decision will be needed as to whether a production run will need to occur.

**6.3 Expiration Dates.** The potency of the disinfectant lasts for about two weeks. After that time the disinfectant tends to revert back to water and salt and is no longer effective as a disinfectant. Due to this all containers and sizes need to be marked with their production date and their expiration date at the time of production. The dates are marked on the labels placed on the containers when they are produced.

**6.4 Discards.** If there are any unused containers of disinfectant these products will need to be appropriately disposed. The discards will be from product expirations and if there is left over product when the demand for disinfectant disinfect recedes.

The most appropriate method of discarding will be to pour the disinfectant down a sink drain with water running to dilute any potency that is remaining. The bottles should be rinsed and then placed in a recycle bin. The log and inventory books should indicate those products that have been discarded.

**6.5 Length of Disinfectant Production Project.** The length of the disinfectant production project will be determined by the demand. When the demand for disinfectant ceases the equipment will be taken apart, cleaned and stored for future possible use. Any leftover product will be poured out due to short term expiration dates and the containers discarded. Any unused containers will be stored as well as salt and other components.

**6.6 Shutdown and Exit Strategy.** The shutdown and exit strategy will be to store the equipment and supplies for future use in case there is a secondary pandemic in the Fall of 2020 that will again need the production of disinfectant. A second option is to return the equipment and materials to WaterStep for use by other organizations.

A decision on the approach will be made at the end of the project.

**Section 7.0 LISTS AND LOG TEMPLATES.**

List and log templates for the project are in this section.

**7.1 Volunteer and Resources List.**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Volunteers and Resources List** | | | | |
| **#** | **Person** | **Phone Number** | **Email** | **Volunteer Duties** |
| 1 | Michael Parker | 502-413-1890 | mkparker@firstcommand.com | Project Manager  Disinfectant Producer |
| 2 | Neil Watkins | 502-544-2804 | neilwatkins20@gmail.com | Treasurer  Disinfectant Producer |
| 3 | Mark Hogg | 643-0939 | mark.hogg@waterstep.org | WaterStep Contact and Advisor |
| 4 | Therese Crumes | 502-645-0093 | tcrumes@msn.com | Volunteers |
| 5 | Greg Heitzman | 502-533-5073 | gheitzman@yahoo.com | Labels |
| 6 | Allan Morgan | 256-653-6403 | allan.morgan@scouting.org | President |
| 7 | John Mills | 502-523-7562 | onebillsfan66@yahoo.com | Vice President |
| 8 | Don Gosser | 502-643-1737 | dongosser@twc.com | Secretary |
| 9 | Mike King | 502.548.6821 | Mrfking001@gmail.com | Documentation |
| 10 | Mark Wilson | 502-551-9619 | mark.wilson@mwarep.org | Grant Acquisition |
| 11 | AW Buie | 907-460-8820 | anthonyawbuie@gmail.com | Consumer Contact |
| 12 | TBD |  |  | Delivery |
| 13 | TBD |  |  | Delivery |
| 14 | TBD |  |  | Delivery |
|  |  |  |  |  |

**7.2 Customer Distribution List.**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Customer Distribution List** | | | | |
| **#** | **Organization,**  **Address** | **Contact Name,**  **Phone Number** | **Quantity Needed** | **Delivery and**  **Replenish Dates** |
|  |  |  |  |  |
|  |  |  |  |  |

**7.3 Disinfectant Production Log.**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Rotary Club of Louisville Suburban – Disinfectant Project – Production Log** | | | | | | | |
| **Batch #** | **Date Produced** | **Date to Expire** | **Production Person** | **Location** | **Concentration and Container** | **Qty** | **Consumer and Delivery Date** |
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**7.4 Delivery Letter Sample.**

