

Organic Pool Water Recycling System at
Island Cove Hotel and Leisure Park

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ABSTRACT

The study entitled Organic Pool Water Recycling System in Island Cove Hotel and Leisure Park provides a complete design of pool water recycling system that ensures effectiveness, efficiency, and economic feasibility. The design includes structural plans with full specifications, and pipeline system layout with complete details.

The establishment has no existing treatment system and is therefore in need of one. The researchers made a simulation based on their design and what treatment the pool needs.

The proposed organic pool water recycling system showed effectiveness through providing successful simulation of treatment processes, treated water test passing on E-coli and Total Coliform Count, proper scheduling of pool water changing through maintenance calendar and design of treatment processes. It also showed efficiency through providing storage tank designs with minimum possible dimensions, and pipeline system layout all without compromising quality. Finally, the system also showed economic feasibility since the proposed system showed more promising values against the establishment's present system in terms of total monthly cost (Php 2,258.00 vs. Php 132,101.01) and other intangible benefits. The proposed system also showed better future value of **Php 127,314,333.30** versus the present system's value of **Php 119,870,826.70** on the method Comparison of Alternatives.

TABLE OF CONTENTS

TITLE PAGE	i
APPROVAL SHEET	ii
ABSTRACT.....	iii
ACKNOWLEDGEMENT	iv
TABLE OF CONTENTS.....	v
LIST OF TABLES	ix
LIST OF FIGURES	ix
LIST OF SYMBOLS	x

CHAPTER 1 :THE PROBLEM AND ITS BACKGROUND

1.1 Introduction.....	1
1.2 Statement of the Problem.....	2
1.3 Objectives of the Study.....	3
1.4 Significance of the Study.....	3
1.5 Scope and Limitations of the Study	4
1.6 Conceptual Framework of the Study	6
1.7 Definition of Terms.....	7

CHAPTER 2: REVIEW OF RELATED LITERATURE

2.1 Galvanized Piping	8
2.2 Values of C to the Formula of Flow of Water in Pipes	9
2.3 Pumps.....	10
2.4 Hazen William Formula.....	10
2.5 Flow Rate/ Discharge, q.....	11
2.6 Energy and Hydraulic Grade Lines.....	11
2.7 Pressure Head.....	11
2.8 Bernoulli's Energy Theorem.....	12
2.9 Energy Equation with Pump.....	12
2.10 Power and Efficiency	13
2.11 Water Treatment	13
2.12 Ground Level Reservoirs	13
2.13 Water Quality.....	14
2.14 Design of Water Treatment for Facilities	14
2.15 Chlorination	14
2.16 Sand Filtration for Pool Water.....	15
2.17 Pool Water Parameters.....	15

2.18 Physical Parameters	16
2.19 Water Filtration.....	17
2.20 Recirculation	17
2.21 Planning and Design Factors for Reservoirs.....	17
2.22 Conceptual Cost Estimating.....	18
2.23 Conceptual Cost Estimating Basics	19
2.24 Conceptual Cost Estimating Definition	19
2.25 Conceptual Cost Estimating Characteristics	19
2.26 Importance of Conceptual Cost Estimates	20
2.27 Preparation of Conceptual Cost Estimates.....	21
2.28 Conceptual Cost Estimating Output.....	21
2.29 Steel Reinforcement.....	22
2.30 Concrete	22
2.31 Safety of Organic Disinfectant Concentrates	22

CHAPTER 3: METHODOLOGY

3.1 Data Gathering.....	24
3.1.1 Simulation of Treatment System Processes	24
3.1.2 Gathering Simulation Water Sample & Analysis of Test Result.....	24
3.1.3 Site Survey on Elevations of Strategic Points.....	24
3.1.4 Volume and Discharge of Water Produced by Swimming Pools	25
3.2 Data Analysis	26
3.2.1 Determination of Reservoir Dimensions and Specifications	26
3.2.2 Site of the Storage Tank	27
3.2.3 Structural Design of Reservoir.....	27
3.2.4 Determination of Pipe Sizes.....	28
3.2.5 Pipe Materials	28
3.2.6 Selection of Pump.....	29
3.2.7 Incorporating Treatment Methods	30
3.2.8 Structural Design & Layout of Chambers, Reservoirs and Pipes	30
3.2 Data Presentation	30

CHAPTER 4: ANALYSIS OF DATA AND RESULTS

4.1 Island Cove Hotel & Leisure Park’s Existing Pool Water Management System and Condition.....	31
4.1.1 Pool Capacities.....	31
4.1.2 Existing Monthly Pool Water Maintenance Frequencies	34

4.1.2.1 Volume & Discharge of Wastewater Produced by Swimming Pools.....	34
4.2 Effective and Efficient Design of Pool Water Recycling System	35
4.2.1 Measures of Effectiveness	35
4.2.1.1 Simulation.....	35
4.2.1.2 Gathering Simulation Water Sample & Test Result.....	36
4.2.1.3 Schedule of Pool Water Maintenance.....	38
4.2.1.4 Design of Treatment Processes.....	39
4.2.1.5 Reduction in Monthly Water Consumption.....	40
4.2.2 Measures of Efficiency	40
4.2.2.1 Determination of Reservoir Design Specifications.....	40
4.2.2.2 Determination of Reservoirs & Chambers Locations.....	44
4.2.2.3 Storage Tank Details.....	44
4.2.2.4 Specifications of Pipeline System.....	45
4.2.2.5 Detailed Computations for Pipe Size and Pump Power.....	47
4.3 Economic Feasibility of the Proposed Treatment System	54
4.4 Details of Computations	55
4.4.1 Cost Estimate	55
4.4.2 Economic Feasibility	62
4.4.3 Cost-Benefit Analysis	64
4.4.4 Comparison of Alternatives	65
4.4.4.1 Present System's Future Worth of Income	67
4.4.4.2 Proposed System's Future Worth of Income	67
4.4.4.3 Present System's Net Present Value	67
4.4.4.4 Proposed System's Net Present Value.....	67

CHAPTER 5: SUMMARY OF FINDINGS AND CONCLUSION

5.1 Summary of Findings.....	69
5.2 Conclusion	70
5.3 Recommendations.....	70

REFERENCES	71
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APPENDICES

Appendix A: Backsight and Foresight Data for Elevations.....	73
Appendix B: Monthly Water Cost	80
Appendix C: Simulation	81

LIST OF TABLES

Table 1.Values of C to the Formula of Flow
of Water in Pipes.....9

Table 2.Comparison of Pumping Techniques.....10

Table 3.Bacteriological Standards16

Table 4.Planning and Design Factors for Reservoirs.....17

Table 5.Island Cove Pool Dimensions.....25

Table 6.Frequency of Changing Pool Water in Island
Cove Hotel and Leisure Park (Peak Season)26

Table 7.Characteristics of Different Pipe Materials28

Table 8.Current Monthly Pool Water Maintenance Frequencies34

Table 9.Volume and Monthly Discharge Produced by the Pools.....35

Table 10.Work Breakdown Structure59

Table 11.Cost Benefit Analysis64

Table 12.Summary of the Two Systems.....65

Table 13.Surveying Data of Island Cove.....73

LIST OF FIGURES

Figure 1.Conceptual Framework6

Figure 2.Galvanized Iron Pipe9

Figure 3.Methodological Framework23

Figure 4.Pool Dimensions.....32

Figure 5.Measuring Pool Perimeters Using Wheel Tape Measure.....32

Figure 6.Simulation Process Being Conducted35

Figure 7.Treated Water Test Result.....37

Figure 8.Proposed Monthly Pool Water Maintenance Calendar38

Figure 9.Hayward Pro Series S244S for Sand
and Activated-Carbon Filter39

Figure 10.Organic Disinfectant Concentrate39

Figure 11.Storage Tank Plan View with Details44

Figure. 12.Storage Tank Section View with Details.....45

Figure 13.Pipeline System Layout.....47

Figure 14.Present System Cash Flow Diagram66

Figure 15. Proposed System Cash Flow Diagram66