TOLAY LAKE REGIONAL PARK

Master Plan



Acknowledgements

This Master Plan is the culmination of years of collaborative work that could not have been completed without the concerted effort of many public agencies, non-profits, stakeholders, and individuals. Regional Parks would like to express gratitude to all the agencies, non-profits, stakeholders, neighbors, staff, and community members who participated and contributed to this Plan through committees, workshops, focus groups, web in-put, and planning meetings.

Sonoma County Board of Supervisors

David Rabbitt, 2nd District Shirlee Zane, 3rd District James Gore, 4th District Lynda Hopkins, 5th District Susan Gorin, 1st District

Funding Partners

Bay Joint Venture
California State Parks
California Department of Fish and Wildlife
California Wildlife Conservation Board
Gordon and Betty Moore Foundation
City of Petaluma
Save the Bay

City of Sonoma
State Coastal Conservancy

Federated Indians of Graton Rancheria

Sonoma County Agricultural Preservation and Open Space District
Friends of Tolay Lake Park

Sonoma County Regional Park Foundation
Gold Foundation
The Bay Institute

Land And Water Conservation Fund
U.S. Fish & Wildlife Service

National Oceanic Atmospheric Administration

Sonoma Land Trust

Wendy Elliot, Conservation Director

Bob Neale, Stewardship Director

California Coastal Conservancy

Federated Indians of Graton Rancheria

Thank you to all of the tribal citizens of the Federated Indians of Graton Rancheria for supporting the project through sharing tribal ancestral knowledge, tribal perspective, and stewardship values.

Greg Sarris, Tribal Chairman

Lorelle Ross, Vice-Chair

Melissa Elgin, Tribal Secretary

Gene Buvelot, Treasurer

Robert Stafford Jr., Member at Large

Lynn Silva, Member at Large

Lawrence Stafford

Buffy McQuillen, Tribal Heritage Preservation Officer

Peter Nelson, Chair of Sacred Sites Protection Committee

Gillian Hayes, Director of Planning and Development

Nick Tipon, Sacred Sites Protection Committee

Charles Johnson, FIGR Monitor David Carrillo, FIGR Monitor

Nick Tipon, former Sacred Sites Committee Member

Jeannette Anglin, former Council Member

Joanne Campbell, former Council Member

Kathleen Smith, Tolay Advisory Group

Robert Baguio, Tolay Advisory Group

Yana Ross, Tolay Advisory Group

Roberta Martinez, Tolay Advisory Group

Eric Goziak, Tolay Advisory Group

Lisa Ouse, Tolay Advisory Group

and the Tribal Environmental Department

Tolay Trails Focus Group

Carolyn Verheyen

John Baas

Ken Wells, E.D., Sonoma County Trails Council

Steve Burchfield, Regional Parks Mounted Assistant Unit

Roger Appleby, Regional Parks Mounted Assistant Unit

Carol Velluntini, Sierra Club - outings

Jeanette Griffiths, Sierra Club - outings

Jerry Lyman, Empire Runners Association

Gary Helfrich, Sonoma County Bike Coalition

Sarah Reid, Horse Council

Kathy Bell, SRJC Disability

Devin Chatoian, FIGR

Gillian Hayes, FIGR

Occidental Arts and Ecology

Lakeville Volunteer Fire Department Nick Silva. Chief

Marin/Sonoma Mosquito and Vector Control Distirct Erik Hawk, Assistant Manager

Neighbors of Tolay Lake Regional Park

Sonoma County Permit and Management Resource Department

Sonoma County Regional Parks

Bert Whitaker, Director
Caryl Hart, Former Director
Melanie Parker, Deputy Director
Steve Ehret, Park Planning Manager
David Robinson, Park Manager
Bethany Facendini, Park Community Engagement Manager
Christina McGuirk, Youth & Community Programs Coordinator
Brandon Bredo, Administrative Ranger Supervisor
Karen Davis-Brown, Planner II
Andrew Stricklin, Former Planning Technician

Prepared by MIG

Carolyn Verheyen, Principal in Charge
John Baas, Project Manager

Katrina Hardt-Holoch, Environmental Analysis Task Lead
Ivy Ku, Master Plan Production

Mark Brandi, GIS Analysis

Maria Mayer, Public Outreach Support

In Association With

Architectural Resources Group, Cathleen Malmstrom, Historic Buildings Evaluation
Peter Baye, Lake Restoration Design Peer Review
Clearwater Hydrology, William Vandivere, Lake Restoration Design Peer Review
Fall Creek Engineering, Peter Haase and Emily Corwin, Wastewater System Design
Fehr and Peers, Dana Weissman, Site Circulation and Access Road Design
Garcia and Associates, Barbara Siskin and Cassidy Debaker, Cultural Resources
Kennedy Jenks, Mike McLeod, Groundwater Hydrology and Potable Water Evaluation
WRA, Geoff Smick, Biological Resources, and George Salvaggio, Lake Restoration Design

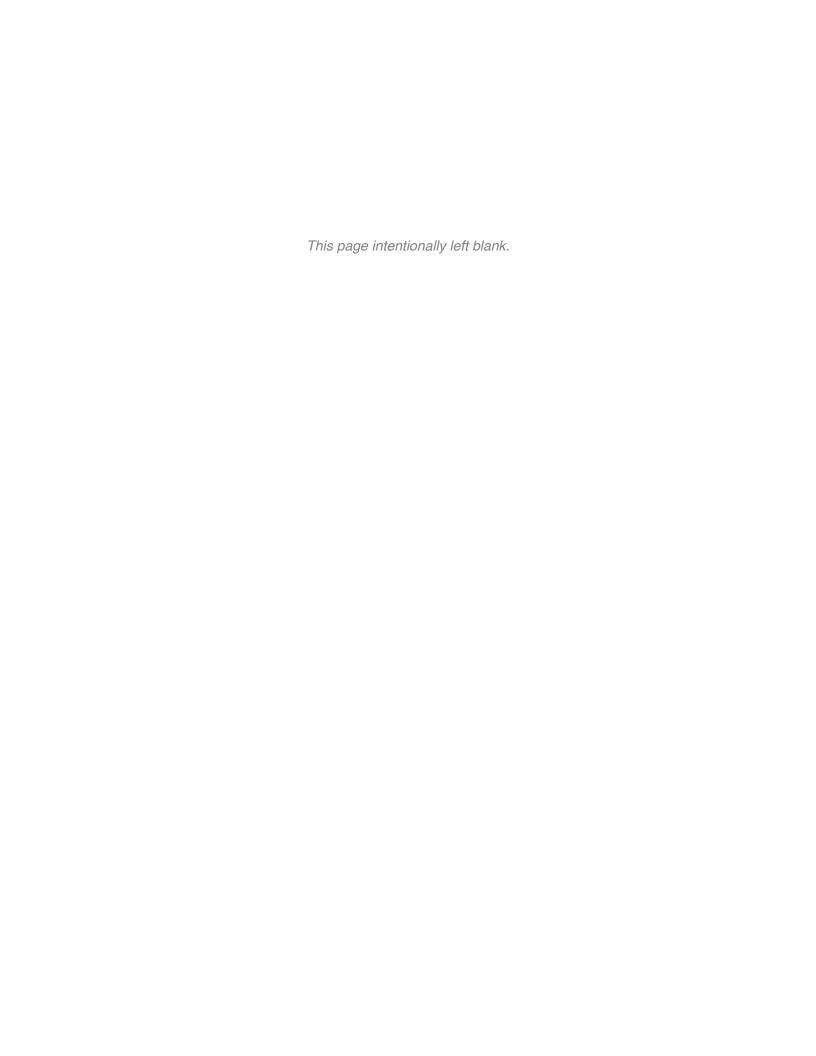


TABLE OF CONTENTS

INTRODUCTION	
Overview and Purpose of the Master Plan	3
Components and Organization of the Master Plan	4
Master Plan Process	4
Acquisition	4
Park Setting	5
History of the Park	10
Natural History	10
Cultural History	12
Park History	19
PURPOSE, VISION, AND GOALS	
Purpose	23
Objectives	23
Goals	24
Habitat Restoration and Enhancement	24
Cultural Resource Conservation	26
Public Access	28
Open Space Protection	29
Environmental, Cultural, and Agricultural Study and Education	29

PUBLIC OUTREACH

Background and Methodology	33
Summary of Community Meetings	33
Community Workshop #1	33
Community Workshop #2	34
Community Workshop #3	35
Focus Group on Trail Users	35
Ideal Trail System	35
Desires for Trail Infrastructure	36
Seasonal Trail Closures	36
Access and Staging	36
Special Events and Races	37
REGULATORY SETTING AND POLICY FRAMEWORK	
Federal	41
Archaeological Resources Protection Act	41
The Native American Graves Protection and Repatriation Act	41
National Register of Historic Places (NRHP)	41
Federal Endangered Species Act	42
The Migratory Bird Treaty Act	42
Clean Water Act Sections 404 and Section 401	42
State	43
Assembly Bill 52	43
California Register of Historical Resources	44
California Endangered Species Act	45
Fully Protected Species and Species of Special Concern	45
Other Sensitive Plants - California Native Plant Society	45
Porter-Cologne Water Quality Control Act	45
California Fish and Game Code Section 1600-1616	46
Sensitive Vegetation Communities	46
Caltrans	46
County	46
Sonoma County General Plan	46
Sonoma County Public Works	46

TOLAY LAKE MASTER PLAN CONCEPTUAL SITE PLAN OPTIONS

Concept Plan Description	49
Interpretation Plan	49
Developing Conceptual Site Plan Options	51
Preferred Site Plan Option	52
Utilities and Infrastructure	53
Trails	61
Trail Types	61
Tolay Lake Restoration	62
Background	62
Historic and Current Lake Conditions	63
Ecological Processes of a Late Holocene Period Tolay Lake	64
Habitat Values and Species	66
Opportunities and Constraints	67
Lake Restoration Alternatives	67
Implementation and Phasing Strategy	73
Project Types	73
Implementation Phases	73
RESOURCE MANAGEMENT PLAN	
Introduction	81
Overview and Purpose	81
Support Studies and Methodology	81
Existing Conditions	82
Setting and Location	82
Land Use and Infrastructure	83
Climate and Watershed	83
Geology and Soils	84
Biological Resources	86
Cultural Resources	87
Encumbrances	87
Existing Resource Management Practices	91
Natural and Cultural Resources Management	94
Natural Resources	94
Cultural Resources	128
Proposed Habitat Restoration and Enhancement Activities	130
Overview	130
Wetland and Tolay Lake	131

Stream and Riparian	131
Native Grassland and Wildflower Field	132
Adaptive Management	132
Adaptive Monitoring and Management	132
Effects of Climate Change	133
Monitoring Methods	135
EDUCATION AND INTERPRETIVE ELEMENTS	
Introduction	155
Purpose and Significance of the Interpretive Master Plan	155
Context for Interpretation	156
Definition	157
Resources for Interpretation	157
Natural Features	157
Cultural Heritage Features	159
Agricultural Features	161
Site Analysis	162
Audience Evaluation	164
Capacity Analysis	164
Audience	165
Thematic Structure	167
Goals	167
Themes, Messages, and Stories	168
Challenges and Strategies	174
Planning Approach	174
Challenges	175

TRAILS PLAN

Types of Trails	181
Multiple Use Trails	182
Single Use Trails	182
Existing Trails	182
Description	182
Proposed Trails	184
Description	184
Road and Trail Decommissioning	187
Trail Design and Construction	187
General Trail Design	187
Multiple-Use Trails	190
Educational Nature Trails (Pedestrians Only)	191
Accessible Trails	192
Emergency Access Roads	193
Trail Tread	194
Trail Drainage Structures	195
Litter Removal Standards	195
OPERATIONS AND MAINTENANCE	
Business Plan, Operations, and Maintenance	199
Business Plan	199
Operations and Maintenance	200
REFERENCES	
Chapter 1	210
Chapter 2 - Chapter 5	211
Chapter 6	211
Chapter 7	218
Chapter 8	218
Chapter 9	218

FIGURES

Figure 1-1 Regional Location	7
Figure 1-2 Existing Project Site	8
Figure 1-3 Existing Park Complex	9
Figure 5-1 Preferred Option for Park Complex	55
Figure 5-2 Preferred Option for Park Interior	56
Figure 5-3 Groundwater Availability	57
Figure 5-4 Preferred Wastewater Treatment System	58
Figure 5-5 Proposed Cannon Lane Roadway Improvements	59
Figure 5-6 Diversion Ditch Habitat Restoration	70
Figure 5-7 Target Habitats – Restoration Alternative 1	71
Figure 5-8 Preferred Tolay Lake Restoration	72
Figure 6-1 Soils	145
Figure 6-2 Existing Restoration Areas and Biological Communities	146
Figure 6-3 Special Status Species Occurrences	147
Figure 6-4 Invasive Species Occurrences	148
Figure 6-5 Park Complex and Visitor Center Area	149
Figure 6-6 Existing Grazing Infrastructure	150
Figure 6-7 Proposed Restoration Areas and Biological Communities	151
Figure 7-1 Proposed Conceptual Interpretive Plan	177
Figure 9-1 Proposed Park Complex Emergency Access	203
Figure 9-2 Proposed Park Site Emergency Access	204

TABLES

Table 5-1 Meeting Participant Voting Patterns on Site Plan Options	52
Table 5-2 Size and Storage Volume for Each of the Restoration Alternatives	68
Table 5-3 Specifications for the Preferred Lake Restoration Alternative	69
Table 5-4 Tolay Lake Master Plan Phasing	75
Table 6-1 Soil Mapping Units and Characteristics	85
Table 6-2 Summary of Proposed Habitat Restoration and Enhancement Areas	s 131
Table 6-3 Long-Term Monitoring of Natural Resources Tasks	139
Table 6-4 Schedule for Long-Term Natural Resources Monitoring	143
Table 6-5 Schedule for Long-Term Cultural Resource Monitoring	144
Table 8-1 Trails on Existing Alignments	182
Table 8-2 Trail Implementation Phasing and Mileage	184
Table 9-1 Historical, Current, and Projected Revenue	199
Table 9-2 Historic, Current, and Projected Expenditures	200
Table 9-3 Revenue Less Expenditures	200

APPENDICES

Appendix A Community Workshop and Survey Reports

Appendix B Conceptual Site Plan Options

Appendix C Historic Structures Report

Appendix D Groundwater Availability Memo

Appendix E Wastewater Treatment Options

Appendix F Analysis of Allowable Park Uses

Appendix G Technical Memorandum - Water Budget Analysis

Appendix H Tolay Lake Conceptual Ecological Model for Restoration Goals

Appendix I Biological Resources Report

Appendix J Biological Resources Study for Tolay Lake Regional Park

Appendix K Biological Resources Study for Tolay Creek Ranch

Appendix L Rangeland Resources Study

Appendix M Tolay Creek Ranch Grazing Plan

Appendix N Wildlife Conservation Board Easement

Appendix O SCAPOSD Conservation Easement for Tolay Lake Ranch

Appendix P SCAPOSD Conservation Easement for Tolay Creek Ranch

Appendix R Capital Investments, Revenue Stream, Expenditures, and Phasing Analysis

Appendix S Operations and Maintenance Checklist

