APPENDIX A

Scoping Materials

APPENDIX A

Scoping Materials

- Notice of Preparation and State Clearinghouse Receipt Letter
- Initial Study Checklist
- Public Scoping Meeting Presentation and Transcript
- Scoping Comments Received

STATE OF CALIFORNIA

GOVERNOR'S OFFICE *of* PLANNING AND RESEARCH

STATE CLEARINGHOUSE AND PLANNING UNIT

EDMUND G. BROWN JR.
GOVERNOR

KEN ALEX
DIRECTOR

Notice of Preparation

January 4, 2017

To: Reviewing Agencies

Re: Draft Biodiversity, Fire, and Fuels Integrated Plan
SCH# 2017012007

Attached for your review and comment is the Notice of Preparation (NOP) for the Draft Biodiversity, Fire, and Fuels Integrated Plan draft Environmental Impact Report (EIR).

Responsible agencies must transmit their comments on the scope and content of the NOP, focusing on specific information related to their own statutory responsibility, within 30 days of receipt of the NOP from the Lead Agency. This is a courtesy notice provided by the State Clearinghouse with a reminder for you to comment in a timely manner. We encourage other agencies to also respond to this notice and express their concerns early in the environmental review process.

Please direct your comments to:

Dain Anderson
Marin Municipal Water District
220 Nellen Avenue
Marin, CA 94925

with a copy to the State Clearinghouse in the Office of Planning and Research. Please refer to the SCH number noted above in all correspondence concerning this project.

If you have any questions about the environmental document review process, please call the State Clearinghouse at (916) 445-0613.

Sincerely,

Scott Morgan
Director, State Clearinghouse

Attachments
cc: Lead Agency

Document Details Report
State Clearinghouse Data Base

SCH# 2017012007
Project Title Draft Biodiversity, Fire, and Fuels Integrated Plan
Lead Agency Marin Municipal Water District

Type NOP Notice of Preparation

Description The Biodiversity, Fire, and Fuels Integrated Plan describes actions to be taken by the Marin Municipal Water District would take to manage its lands on Mount Tamalpais and at Nicasio and Soulajule reservoirs to reduce fire hazards and to maintain and enhance ecosystem functions.

Lead Agency Contact

Name Dain Anderson
Agency Marin Municipal Water District
Phone 415-945-1586 **Fax**
email
Address 220 Nellen Avenue
City Marin **State** CA **Zip** 94925

Project Location

County Marin
City
Region
Cross Streets Mt. Tamalpais Watershed & Nicasio and Soulajue Reservoirs
Lat / Long
Parcel No.
Township **Range** **Section** **Base**

Proximity to:

Highways 1, 101
Airports
Railways
Waterways Lagunitas, Halleck, & Nicasio Creeks & Arroyo Sausal
Schools
Land Use Open area, ag and ag residential planned/open space & ag

Project Issues Aesthetic/Visual; Air Quality; Archaeologic-Historic; Biological Resources; Drainage/Absorption; Forest Land/Fire Hazard; Geologic/Seismic; Noise; Recreation/Parks; Schools/Universities; Toxic/Hazardous; Traffic/Circulation; Vegetation; Wetland/Riparian; Cumulative Effects

Reviewing Agencies Resources Agency; Cal Fire; Office of Historic Preservation; Department of Parks and Recreation; San Francisco Bay Conservation and Development Commission; Department of Water Resources; Department of Fish and Wildlife, Region 3; Office of Emergency Services, California; Native American Heritage Commission; State Lands Commission; California Highway Patrol; Caltrans, District 4; Regional Water Quality Control Board, Region 2; Department of Pesticide Regulation

Date Received 01/04/2017 **Start of Review** 01/04/2017 **End of Review** 02/02/2017

Note: Blanks in data fields result from insufficient information provided by lead agency.

Print Form

Appendix C

Notice of Completion & Environmental Document Transmittal

Mail to: State Clearinghouse, P.O. Box 3044, Sacramento, CA 95812-3044 (916) 445-0613
For Hand Delivery/Street Address: 1400 Tenth Street, Sacramento, CA 95814

SCH# 2017012007

Project Title: Draft Biodiversity, Fire, and Fuels Integrated Plan

Lead Agency: Marin Municipal Water District | Contact Person: Dain Anderson
Mailing Address: 220 Nellen Avenue | Phone: (415) 945-1586
City: Corte Madera, CA | Zip: 94925 | County: Marin

Project Location: County: Marin | City/Nearest Community: _____
Cross Streets: Mt. Tamalpais Watershed & Nicasio, and Soulajule Reservoirs | Zip Code: _____
Longitude/Latitude (degrees, minutes and seconds): ____° ____′ ____″ N / ____° ____′ ____″ W Total Acres: _____
Assessor's Parcel No.: _____ Section: _____ Twp.: _____ Range: _____ Base: _____
Within 2 Miles: State Hwy #: 1 & 101 | Waterways: Lagunitas, Halleck, & Nicasio Creeks & Arroyo Sausal
Airports: _____ | Railways: _____ | Schools: _____

Document Type:

CEQA: ☒ NOP ☐ Draft EIR ☐ Supplement/Subsequent EIR (Prior SCH No.) _____ ☐ Early Cons ☐ Neg Dec ☐ Mit Neg Dec Other: _____
NEPA: ☐ NOI ☐ EA ☐ Draft EIS ☐ FONSI Other: ☐ Joint Document ☐ Final Document ☐ Other: _____

Governor's Office of Planning & Research
JAN 04 2017
STATE CLEARINGHOUSE

Local Action Type:

☐ General Plan Update ☐ General Plan Amendment ☐ General Plan Element ☐ Community Plan
☐ Specific Plan ☐ Master Plan ☐ Planned Unit Development ☐ Site Plan
☐ Rezone ☐ Prezone ☐ Use Permit ☐ Land Division (Subdivision, etc.)
☐ Annexation ☐ Redevelopment ☐ Coastal Permit ☒ Other: Veg Mngmnt Pln

Development Type:

☐ Residential: Units _____ Acres _____
☐ Office: Sq.ft. _____ Acres _____ Employees _____
☐ Commercial: Sq.ft. _____ Acres _____ Employees _____
☐ Industrial: Sq.ft. _____ Acres _____ Employees _____
☐ Educational: _____
☐ Recreational: _____
☐ Water Facilities: Type _____ MGD _____
☐ Transportation: Type _____
☐ Mining: Mineral _____
☐ Power: Type _____ MW _____
☐ Waste Treatment: Type _____ MGD _____
☐ Hazardous Waste: Type _____
☒ Other: Biodiversity, Fire, and Fuels Integrated Plan

Project Issues Discussed in Document:

☒ Aesthetic/Visual
☐ Agricultural Land
☒ Air Quality
☒ Archeological/Historical
☒ Biological Resources
☐ Coastal Zone
☒ Drainage/Absorption
☐ Economic/Jobs
☐ Fiscal
☐ Flood Plain/Flooding
☒ Forest Land/Fire Hazard
☒ Geologic/Seismic
☐ Minerals
☒ Noise
☐ Population/Housing Balance
☐ Public Services/Facilities
☒ Recreation/Parks
☐ Schools/Universities
☐ Septic Systems
☐ Sewer Capacity
☒ Soil Erosion/Compaction/Grading
☐ Solid Waste
☒ Toxic/Hazardous
☒ Traffic/Circulation
☒ Vegetation
☒ Water Quality
☐ Water Supply/Groundwater
☒ Wetland/Riparian
☐ Growth Inducement
☐ Land Use
☒ Cumulative Effects
☐ Other: _____

Present Land Use/Zoning/General Plan Designation:

Open Area, Agricultural, & Agricultural Residential Planned (Zoning)/Open Space & Agricultural (General Plan)

Project Description: *(please use a separate page if necessary)*

The Biodiversity, Fire, and Fuels Integrated Plan describes actions to be taken by the Marin Municipal Water District would take to manage its lands on Mount Tamalpais and at Nicasio and Soulajule reservoirs to reduce fire hazards and to maintain and enhance ecosystem functions. A copy of the Draft BFFIP and supporting documents may be obtained at www.marinwater.org/bffip.

Note: The State Clearinghouse will assign identification numbers for all new projects. If a SCH number already exists for a project (e.g. Notice of Preparation or previous draft document) please fill in.

NOP Distribution List

County: Marin **SCH#** 2017012007

Resources Agency

- [x] **Resources Agency**
  Nadell Gayou
- [ ] **Dept. of Boating & Waterways**
  Denise Peterson
- [ ] **California Coastal Commission**
  Elizabeth A. Fuchs
- [ ] **Colorado River Board**
  Lisa Johansen
- [ ] **Dept. of Conservation**
  Elizabeth Carpenter
- [ ] **California Energy Commission**
  Eric Knight
- [x] **Cal Fire**
  Dan Foster
- [ ] **Central Valley Flood Protection Board**
  James Herota
- [x] **Office of Historic Preservation**
  Ron Parsons
- [x] **Dept of Parks & Recreation**
  Environmental Stewardship Section
- [ ] **California Department of Resources, Recycling & Recovery**
  Sue O'Leary
- [x] **S.F. Bay Conservation & Dev't. Comm.**
  Steve Goldbeck
- [x] **Dept. of Water Resources**
  Resources Agency
  Nadell Gayou

Fish and Game

- [ ] **Depart. of Fish & Wildlife**
  Scott Flint
  Environmental Services Division
- [ ] **Fish & Wildlife Region 1**
  Curt Babcock
- [ ] **Fish & Wildlife Region 1E**
  Laurie Harnsberger
- [ ] **Fish & Wildlife Region 2**
  Jeff Drongesen
- [x] **Fish & Wildlife Region 3**
  Craig Weightman
- [ ] **Fish & Wildlife Region 4**
  Julie Vance
- [ ] **Fish & Wildlife Region 5**
  Leslie Newton-Reed
  Habitat Conservation Program
- [ ] **Fish & Wildlife Region 6**
  Tiffany Ellis
  Habitat Conservation Program
- [ ] **Fish & Wildlife Region 6 I/M**
  Heidi Calvert
  Inyo/Mono, Habitat Conservation Program
- [ ] **Dept. of Fish & Wildlife M**
  William Paznokas
  Marine Region

Other Departments

- [ ] **Food & Agriculture**
  Sandra Schubert
  Dept. of Food and Agriculture
- [ ] **Depart. of General Services**
  Public School Construction
- [ ] **Dept. of General Services**
  Cathy Buck/George Carollo
  Environmental Services Section
- [ ] **Delta Stewardship Council**
  Kevan Samsam
- [ ] **Housing & Comm. Dev.**
  CEQA Coordinator
  Housing Policy Division

Independent Commissions,Boards

- [ ] **Delta Protection Commission**
  Erik Vink
- [x] **OES (Office of Emergency Services)**
  Monique Wilber
- [x] **Native American Heritage Comm.**
  Debbie Treadway
- [ ] **Public Utilities Commission**
  Supervisor
- [ ] **Santa Monica Bay Restoration**
  Guangyu Wang
- [x] **State Lands Commission**
  Jennifer Deleong
- [ ] **Tahoe Regional Planning Agency (TRPA)**
  Cherry Jacques

Cal State Transportation Agency CalSTA

- [ ] **Caltrans - Division of Aeronautics**
  Philip Crimmins
- [ ] **Caltrans – Planning HQ LD-IGR**
  Terri Pencovic
- [x] **California Highway Patrol**
  Suzann Ikeuchi
  Office of Special Projects

Dept. of Transportation

- [ ] **Caltrans, District 1**
  Rex Jackman
- [ ] **Caltrans, District 2**
  Marcelino Gonzalez
- [ ] **Caltrans, District 3**
  Eric Federicks – South
  Susan Zanchi - North
- [x] **Caltrans, District 4**
  Patricia Maurice
- [ ] **Caltrans, District 5**
  Larry Newland
- [ ] **Caltrans, District 6**
  Michael Navarro
- [ ] **Caltrans, District 7**
  Dianna Watson
- [ ] **Caltrans, District 8**
  Mark Roberts
- [ ] **Caltrans, District 9**
  Gayle Rosander
- [ ] **Caltrans, District 10**
  Tom Dumas
- [ ] **Caltrans, District 11**
  Jacob Armstrong
- [ ] **Caltrans, District 12**
  Maureen El Harake

Cal EPA

Air Resources Board

- [ ] Airport & Freight
  Cathi Slaminski
  - [ ] Transportation Projects
    Nesamani Kalandiyur
  - [ ] Industrial/Energy Projects
    Mike Tollstrup
- [ ] **State Water Resources Control Board**
  Regional Programs Unit
  Division of Financial Assistance
- [ ] **State Water Resources Control Board**
  Cindy Forbes – Asst Deputy
  Division of Drinking Water
- [ ] **State Water Resources Control Board**
  Div. Drinking Water #_____
- [ ] **State Water Resources Control Board**
  Student Intern, 401 Water Quality Certification Unit
  Division of Water Quality
- [ ] **State Water Resouces Control Board**
  Phil Crader
  Division of Water Rights
- [ ] **Dept. of Toxic Substances Control**
  CEQA Tracking Center
- [x] **Department of Pesticide Regulation**
  CEQA Coordinator

Regional Water Quality Control Board (RWQCB)

- [ ] **RWQCB 1**
  Cathleen Hudson
  North Coast Region (1)
- [x] **RWQCB 2**
  Environmental Document Coordinator
  San Francisco Bay Region (2)
- [ ] **RWQCB 3**
  Central Coast Region (3)
- [ ] **RWQCB 4**
  Teresa Rodgers
  Los Angeles Region (4)
- [ ] **RWQCB 5S**
  Central Valley Region (5)
  - [ ] **RWQCB 5F**
    Central Valley Region (5)
    Fresno Branch Office
  - [ ] **RWQCB 5R**
    Central Valley Region (5)
    Redding Branch Office
- [ ] **RWQCB 6**
  Lahontan Region (6)
  - [ ] **RWQCB 6V**
    Lahontan Region (6)
    Victorville Branch Office
- [ ] **RWQCB 7**
  Colorado River Basin Region (7)
- [ ] **RWQCB 8**
  Santa Ana Region (8)
- [ ] **RWQCB 9**
  San Diego Region (9)

- [ ] **Other** _____
  _____
  _____
- [ ] _____
  Conservancy

Last Updated 7/19/2016

MARIN MUNICIPAL
WATER DISTRICT

220 Nellen Avenue Corte Madera CA 94925-1169
marinwater.org

NOTICE OF PREPARATION

TO PREPARE AN ENVIRONMENTAL IMPACT REPORT

FOR THE

DRAFT BIODIVERSITY, FIRE, AND FUELS INTEGRATED PLAN

CALIFORNIA ENVIRONMENTAL QUALITY ACT

Date: January 4, 2017

To: Interested Parties

From: Marin Municipal Water District

NOTICE IS HEREBY GIVEN that the Marin Municipal Water District (district) is serving as Lead Agency, pursuant to the California Environmental Quality Act (CEQA), for the Draft Biodiversity, Fire, and Fuels Integrated Plan (BFFIP).

The district has prepared the Draft BFFIP to guide actions to be taken by the district to manage its lands on Mount Tamalpais and at Nicasio and Soulajule reservoirs to reduce fire hazards and to maintain and enhance ecosystem functions. A copy of the Draft BFFIP and supporting documents may be obtained at www.marinwater.org/bffip.

The district developed the Draft Wildfire Protection and Habitat Improvement Plan (WPHIP) in 2012; however, in response to increased public concern and regulatory uncertainty of the herbicide glyphosate, the district revised its approach and opted to not finalize the 2012 Draft WPHIP with herbicides included in the implementation options. The BFFIP has been developed and is largely based on the manual and mechanical methods presented in the 2012 Draft WPHIP with the removal of herbicides, and the addition of forestry health and greenhouse gas balance goals, actions, and projects.

Adoption and implementation of the BFFIP by the district are considered discretionary actions and are, therefore, subject to CEQA. The district has prepared an Initial Study (IS), pursuant to CEQA, to determine whether, based on substantial evidence, the adoption and implementation of the BFFIP may have a significant adverse effect on the environment.

CEQA requires an Environmental Impact Report (EIR) to be prepared if substantial evidence indicates that the proposed project may result in significant impacts that cannot be mitigated or if a project involves considerable public controversy. The results of the IS show that the proposed project may have a significant impact on the environment and, thus, the district will prepare an EIR. The impact analyses included in the IS will be used to guide preparation of the EIR. The EIR will focus on the issues with potential impacts, as identified in the IS. Pursuant to CEQA, appropriate studies and documentation will be prepared to analyze any potential adverse environmental effects associated with the proposed BFFIP.

POSTED 1/4/17 TO 2/3/17

NOTICE IS HEREBY FURTHER GIVEN that the district has issued a Notice of Preparation (NOP) of an EIR on January 4, 2017, beginning a 30-day period, ending on February 3, 2017, to solicit input on the scope of the environmental analyses to be included in the EIR. A copy of the complete NOP may be obtained from the district's website at www.marinwater.org/bffip.

Interested persons are encouraged to submit written comments on the scope of analysis by mail or electronically. Comments may be submitted by mail to:

Dain Anderson
Environmental Services Coordinator
Marin Municipal Water District
220 Nellen Avenue
Corte Madera, California 94925

Comment letters may also be submitted electronically, in pdf text format (if less than 10 megabytes in total size), to bffipeir@marinwater.org.

All comments must be received no later than 4:00 PM, Friday, February 3, 2017.

Comments not specifically mailed or emailed as directed above may not be considered. All comments received after the above deadline will not be accepted unless the district determines otherwise.

Comments should be limited to assisting the district in identifying the range of actions, alternatives, mitigation measures, and potential significant environmental effects to be analyzed in the EIR and to eliminate issues that do not need to be evaluated in depth.

NOTICE IS HEREBY FURTHER GIVEN that the district will hold a public meeting to solicit agency and public input on the scope of the environmental analysis to be included in the EIR. The meeting will be held on January 25, 2017 at the Marin Art & Garden Center located at 30 Sir Francis Drake Boulevard, Ross, California 94957. The meeting will begin at 7:00 PM.

Oral comments received in the public meeting regarding the environmental analysis will be considered in preparing the EIR

APPENDIX A

Scoping Materials

- Notice of Preparation and State Clearinghouse Receipt Letter
- Initial Study Checklist
- Public Scoping Meeting Presentation and Transcript
- Scoping Comments Received

Marin Municipal Water District

Biodiversity, Fire, and Fuels Integrated Plan

Initial Study

January 2017

PANORAMA ENVIRONMENTAL, INC.

One Embarcadero Center, Suite 740 San Francisco, CA 94111 650-373-1200 **www.panoramaenv.com**

Marin Municipal Water District

Biodiversity, Fire, and Fuels Integrated Plan

Initial Study

January 2017

Prepared for:
Marin Municipal Water District
220 Nellen Avenue
Corte Mader, CA 94925

Prepared by:
Panorama Environmental, Inc.
One Embarcadero Center, Suite 740
San Francisco, CA 94111
650-373-1200
tania.treis@panoramaenv.com

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LIST OF ACRONYMS

A

AB	Assembly Bill
ACOE	U.S. Army Corps of Engineers

B

BAAQMD	Bay Area Air Quality Management District
BFFIP	Biodiversity, Fire, and Fuels Integrated Plan
BMP	Best Management Practices

C

CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act

E

EIR	Environmental Impact Report

I

IARC	International Agency for Research on Cancer
IPM	Integrated Pest Management
IS	Initial Study

M

MA	Management Action
MMWD	Marin Municipal Water District

S

SFRWQCB	San Francisco Bay Regional Water Quality Control Board

V

VMP	Vegetation Management Plan

W

WPHIP	Wildfire Protection and Habitat Improvement Plan
WUI	Wildland Urban Interface

1 INTRODUCTION

1.1 PROPOSED PROJECT

Marin Municipal Water District (MMWD) proposes to adopt and implement the Biodiversity, Fire, and Fuels Integrated Plan (BFFIP). The purpose of the BFFIP is to define and guide the methods to minimize the risk from wildfires while simultaneously preserving and enhancing existing significant biological resources. The BFFIP is currently in draft form and available for review at https://www.marinwater.org/455/Biodiversity-Fire-and-Fuels-Integrated-P.

1.2 CEQA PROCESS

Adoption and implementation of the BFFIP by MMWD are considered discretionary actions and are, therefore, subject to the California Environmental Quality Act (CEQA). MMWD has prepared this Initial Study (IS), pursuant to CEQA, to determine whether, based on substantial evidence, the project may have a significant adverse effect on the environment. The two goals of this IS are to:

- Identify the environmental resources that would not be affected by the project, would be affected at a less than significant level, or would be significantly affected but can be mitigated to a less than significant level.
- Identify the environmental resources to which the project may have a significant impact.

CEQA requires an Environmental Impact Report (EIR) to be prepared if substantial evidence indicates that the proposed project may result in significant impacts that cannot be mitigated or if a project involves considerable public controversy. The results of the IS show that the proposed project may have a significant impact on the environment and, thus, MMWD will prepare an EIR. The impact analyses included in the IS will be used to prepare the EIR. The EIR will focus on the issues with potential impacts, as identified in this IS.

This page is intentionally left blank.

2 BACKGROUND INFORMATION

2.1 PROJECT TITLE

Marin Municipal Water District Biodiversity, Fire, and Fuels Integrated Plan (BFFIP)

2.2 LEAD AGENCY AND ADDRESS

Marin Municipal Water District
220 Nellen Avenue
Corte Madera, CA 94925-1169

2.3 CONTACT PERSON

Dain Anderson, Environmental Services Manager
415-945-1586

2.4 PROJECT LOCATION/DESCRIPTION

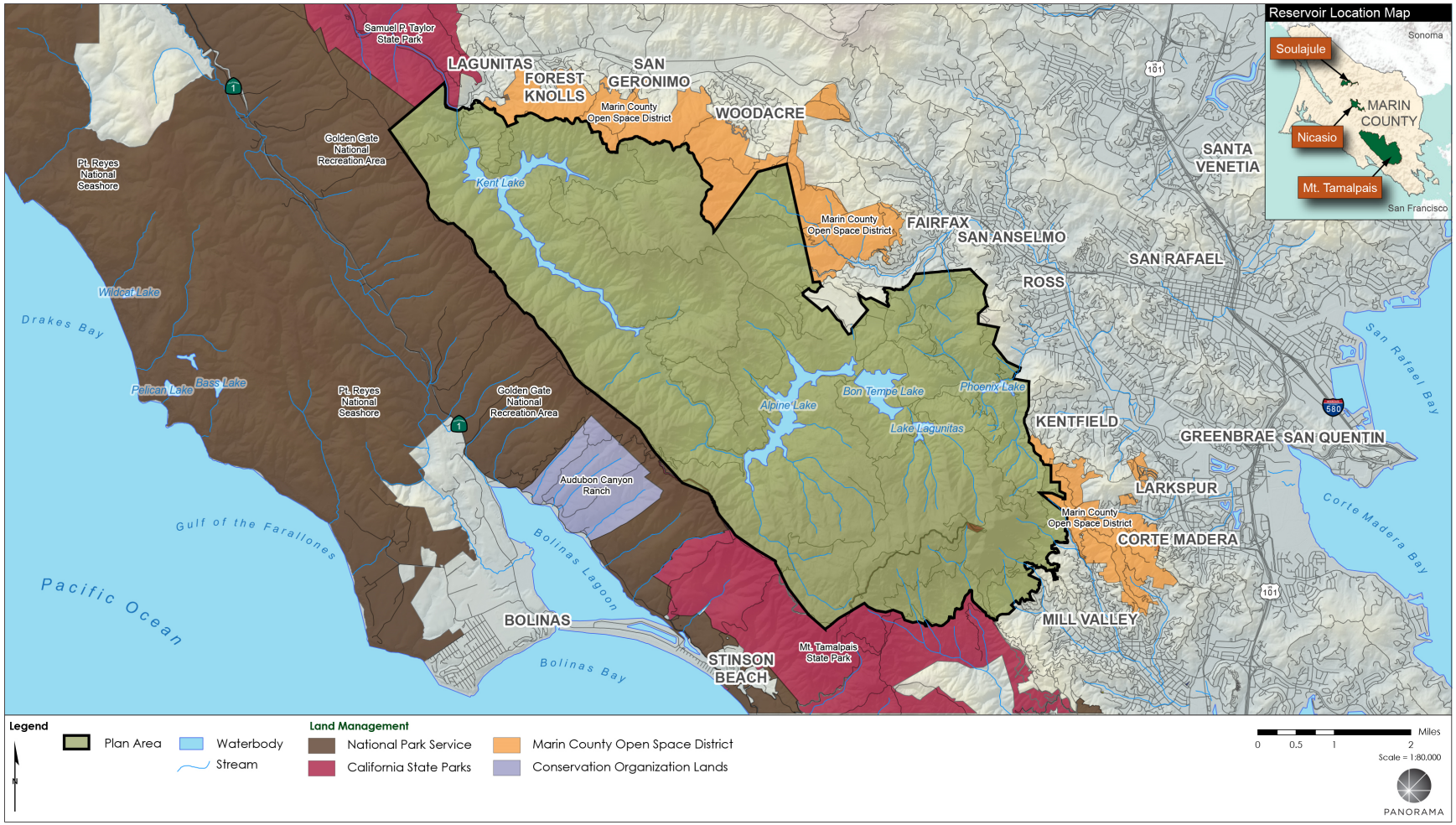
2.4.1 Project Location

The BFFIP would be implemented on MMWD lands in Marin County, California. MMWD lands are shown on Figure 2.4-1. The BFFIP would be implemented across three administrative units, including:

- Mt. Tamalpais Watershed (approximately 18,900 acres)
- Nicasio Reservoir Lands (approximately 1,600 acres)
- Soulajule Reservoir Lands (approximately 1,100 acres)

The Mt. Tamalpais watershed is in the southern portion of Marin County, the Soulajule Reservoir is in the north-central area of Marin County, and the Nicasio Reservoir is located between the Mt. Tamalpais Watershed and the Soulajule Reservoir.

Figure 2.4-1 MMWD Lands



2.4.2 Setting

2.4.2.1 Mount Tamalpais Watershed

MMWD provides water for approximately 190,000 people living in central and southern Marin County. The Mount Tamalpais Watershed contains the drainage areas for five reservoirs, and includes the entire upper watershed of Lagunitas Creek and much of Mount Tamalpais itself. This administrative unit also includes lands just outside or adjacent to the communities of Lagunitas, Forest Knolls, San Geronimo, Woodacre, Fairfax, San Anselmo, Ross, Kentfield, Larkspur, Corte Madera, and Mill Valley. The district's four main water supply reservoirs are in the Lagunitas Creek watershed (Lagunitas, Bon Tempe, Alpine, and Kent Lakes). Phoenix Lake is located on Ross Creek, which is a tributary of Corte Madera Creek. This small reservoir is rarely used to supply water, but is available in case of severe drought.

The areas support a rich variety of vegetation communities. The biodiversity on district lands provides vital ecological and biological resources, and social benefits. These lands provide diverse and high quality habitat; create an excellent water supply; protect soils and prevent erosion; mitigate climate change with carbon storage; provide a scenic natural landscape for recreation; offer a resource for research and education; provide an aesthetically pleasing setting for neighboring towns; and contribute to the biodiversity of the Bay Area region and California.

Hikers, horseback riders, joggers, bicyclists, anglers, picnickers, birders, naturalists and other visitors frequently use district lands, especially the Mount Tamalpais Watershed. District lands are open to the public during daylight hours. The public may access all reservoir shorelines for fishing, including Nicasio and Soulajule Reservoirs.

2.4.2.2 Nicasio Reservoir

The Nicasio Reservoir administrative unit is located on Nicasio Creek in Nicasio Valley to the north of the Mt. Tamalpais Watershed. It consists of the 845-acre reservoir and a 787-acre ring of land around the reservoir. These lands support grassland and shrub plant communities, as well as several special status plant species. Recreational use in this unit is mainly limited to fishing, though there are some hiking trails.

2.4.2.3 Soulajule Reservoir

The Soulajule Reservoir administrative unit is located on the Arroyo Sausal branch of Walker Creek to the north of Nicasio Reservoir. It consists of the 290-acre reservoir and an 810-acre ring of land around the reservoir. These lands support a mosaic of grassland, shrubland, and oak woodland. The reservoir is primarily used by anglers.

2.4.3 Project History

2.4.3.1 1995 VMP

MMWD adopted its first vegetation management plan in 1995 (1995 VMP). MMWD's chief management concern at the time was reducing fire hazards on MMWD's lands while minimizing impacts on natural resources. The 1995 VMP included recommendations for the following:

- Creation and maintenance of a series of fuelbreaks. Fuelbreaks were intended to subdivide the watershed into discrete parts, making it easier to keep a wildfire from moving from one section of the watershed to another.
- Fire hazard reduction projects and actions on and off the watershed, including upgrades to fire suppression equipment, staff training, and water distribution lines connected to hydrants.
- Mitigating the rapidly expanding invasive weed populations on the watershed; MMWD committed to reducing the spread of broom.

In 2003, the district adopted an Integrated Pest Management (IPM) program to control and eliminate highly invasive weeds. The IPM program formalized the use of a variety of techniques recommended in the 1995 VMP, and addressed the district's expanding use of herbicides; however, the district suspended the application of herbicides in August 2005 in response to public concerns regarding the safe use of herbicides. That suspension remains in effect as of the publication of this document.

The district currently maintains vegetation on the watershed through the physical methods described in the 1995 VMP: prescribed burning, mowing, and hand removal. Methods of fuelbreak maintenance and invasive weed removal are largely variations of mowing, mastication, manual weed removal, and prescribed burning. The district's ability to manage fuelbreaks and invasive weeds has been inhibited by limited resources. Broom and other invasive weeds continue to spread.

2.4.3.2 2012 WPHIP

After several years of data collection, community outreach, technical studies, review of herbicide risks, and research on the most effective methods of vegetation management, the district developed a new Draft VMP and released it for public comment in September 2012 under the title Draft Wildfire Protection and Habitat Improvement Plan (WPHIP). The process to prepare an EIR pursuant to CEQA also commenced at that time. The 2012 Draft WPHIP addressed integrated methods for using both limited conventional herbicides and manual and mechanical methods to maintain vegetation on district lands (MMWD 2012).

The 2012 Draft WPHIP received considerable public scrutiny due to its presentation of one approach to vegetation management that included the limited use of three conventional herbicides. Over the following three years, additional evaluation of herbicide risk was undertaken by the district. In 2015, the International Agency for Research on Cancer (IARC), a branch of the World Health Organization, classified the herbicide glyphosate as "probably carcinogenic to humans." In response to increased public concern and regulatory uncertainty resulting from this classification, the district revised its approach and opted to not finalize the 2012 Draft WPHIP with herbicides included in the implementation options.

This BFFIP has instead been developed and is largely based on the manual and mechanical methods presented in the 2012 Draft WPHIP, with the removal of herbicides, and the addition of forestry health and greenhouse gas balance goals, actions, and projects.

2.4.3.3 2016 BFFIP

The environmental effects of the BFFIP will be assessed in a new Programmatic EIR pursuant to CEQA. The Programmatic EIR also will identify and assess alternatives to the BFFIP, and will be circulated for public review and comment, consistent with CEQA requirements. Any comments received will be addressed and revisions to either the Programmatic EIR or to the BFFIP may be made to address environmental concerns raised by the public or agencies during the public review period, or other concerns and recommendations that the district believes are warranted. The district will prepare the final EIR and the final version of the BFFIP. The final EIR will be subject to certification by the district's Board of Directors prior to, or concurrent with, the approval of the final BFFIP.

2.4.4 BFFIP Need, Purpose, and Goals

The primary need for the BFFIP is to define a plan of actions and projects that, when implemented, will reduce fire hazards and would maintain and enhance ecosystem functions.

The purpose of the BFFIP is to define the detailed actions by which reducing fire hazards and protecting biodiversity are implemented, including adaptive management techniques. MMWD has acquired data and experience regarding effective and feasible management techniques in the years since the 1995 VMP. New information on fire hazard reduction, ecological processes, and management tools has become available. Environmental conditions have changed, and new threats to biodiversity have emerged that are addressed in the new plan.

The BFFIP identifies three fundamental goals and a series of approaches for each goal. These goals and approaches are presented in Table 2.4-1.

Table 2.4-1 Goals and Approaches for the BFFIP

Goal	Approach
Goal 1: Minimize the Risk from Wildfire	Approach 1.1: Prevent destruction of structures and loss of life from wildfires.
	Approach 1.2. Optimize fuelbreak retreatment intervals.
	Approach 1.3: Reduce the potential size and intensity of fires on the watershed.
	Approach 1.4: Reduce the potential for fire ignitions.
	Approach 1.5: Work with other agencies and landowners to reduce fire hazards.
Goal 2: Preserve and Enhance Existing Significant Biological Resources	Approach 2.1: Complete the inventories and mapping of significant vegetation resources and aquatic features (e.g. streams, lakes, wetlands, seeps, springs, marshes).
	Approach 2.2: Detect changes and threats to special status species populations, other significant resources, and weeds by developing and implementing monitoring programs.
	Approach 2.3: Prevent the loss of special status plant species, populations, and other sensitive resources.

Goal	Approach
	Approach 2.4: Restore ecosystem resiliency, functions and values in areas impacted by disease, weed invasion, fire suppression, climate change, and other ecosystem stressors.
Goal 3: Provide an adaptive framework for the periodic review and revision of BFFIP implementation decisions in response to changing conditions and improved knowledge	Approach 3.1: Monitor indicators of stressors of vegetation
	Approach 3.2: Monitor management activities and, if warranted, revise approaches or actions.
	Approach 3.3: Experiment with emerging invasive species control and restoration techniques and incorporate those that are effective into the BFFIP.
	Approach 3.4: Continue to work with surrounding land management agencies and the public to foster education, research, and volunteer efforts.
	Approach 3.5: Update the district's Integrated Pest Management (IPM) policies and techniques in response to new information.

2.4.5 BFFIP Actions

2.4.5.1 Overview

The BFFIP identifies four threats to MMWD lands: fire, invasive weeds, forest disease, and climate change. The BFFIP also acknowledges that these threats interact with each other to compound the threats (e.g., more forest disease increases the threat of invasive weeds, which increases the threat of fire). The BFFIP identifies 27 specific actions that would be implemented to address these four interacting threats.

2.4.5.2 Inventorying, Planning, and Planning Management Actions

The first 19 management actions of the BFFIP describe inventorying, monitoring, and planning management actions (see Chapter 5 of the BFFIP). No physical impacts to MMWD lands would occur because of the implementation of these actions and thus, no environmental impacts would occur. These actions are not discussed further in this document.

2.4.5.3 Vegetation Management Actions

Eight vegetation management actions (MA 20 to MA-27, as identified in the BFFIP) would be implemented. These actions would involve projects that would have physical impacts. Table 2.4-2 summarizes the vegetation management actions in the BFFIP, the performance criteria for those actions, and the units that would be treated for each action. The environmental analysis will focus on the potential impacts from these eight actions.

Table 2.4-2 Vegetation Management Actions

Action No.	Action	Performance Criteria	Units	Units to be Treated				
				Year 1	Year 2	Year 3	Year 4	Year 5
MA-20	Cyclical Maintenance of linear fuelbreaks and defensible	Retreat fuels in existing fuelbreaks	Acres	150	170	180	190	200
		Cyclical mowing of fine fuels	Acres	10	20	20	20	20

Action No.	Action	Performance Criteria	Units	Units to be Treated				
				Year 1	Year 2	Year 3	Year 4	Year 5
	space, high ignition areas, dams, and roadsides	Cyclical removal of broom in Optimized and Transitional Zones	Acres	240	260	260	260	260
		Roadside mowing	Acres	10	30	40	40	40
		Dam maintenance	Acres	30	40	40	40	40
MA-21	Fuelbreak Construction	New fuelbreak construction	Acres	5	10	10	10	15
MA-22	Early Detection Rapid Response	Annual surveys	Mile	200	260	260	260	260
		Weed control treatments	Patch	75	100	100	100	100
MA-23	Forest Stand Structure improvement	Reduce accumulated fuels and brush	Acres	20	20	30	50	60
		Prescribed burning	Project	0	1	2	1	1
MA -24	Grassland and Oak woodland improvement	Douglas-Fir thinning	Acres	30	100	140	150	200
		Prescribed burning	Project	1	2	3	3	4
		*Broom: Initial removal	Acres	100	150	225	260	300
		Broom: Long term maintenance	Acres	205	205	205	205	205
		Yellow Star thistle	Acres	100	100	110	120	120
		Goat grass	Acres	32	35	35	35	35
MA-25	Reintroduce species	Planting	Project	1	2	2	2	3
		Habitat modification	Project	1	2	2	2	3
MA-26	Develop and implement 10-year restoration plans for Potrero Meadow, Sky Oaks Meadow, and Nicasio Island.	Develop and implement a 10-year restoration plan for Potrero Meadows and restore 30 acres.	The target is to develop a restoration plan for each of the three sites and initiate work on at least two of the sites within 5 years following Plan adoption.					
		Develop and implement a 10-year restoration plan for Sky Oaks Meadow and restore 50 acres.						
		Develop and implement a 10-year restoration plan for Nicasio island and restore 75 acres of native grassland.						

Action No.	Action	Performance Criteria	Units	Units to be Treated				
				Year 1	Year 2	Year 3	Year 4	Year 5
MA-27	Weed Control trials	Implementation	Project	1	2	2	3	3

2.4.5.4 Vegetation Management Toolbox

The tools available for vegetation management are fundamentally the same, regardless of the purpose of any given project, be it fuelbreak construction, fuelbreak maintenance, forest enhancement, or habitat restoration. Project-specific differences arise in the use of those tools, with the timing, scale, intensity, and frequency of their use driven by site conditions and desired outcome. The district has an extensive history working with various tools and techniques and now uses primarily those that have been demonstrated to be both efficient and cost-effective for the specific project needs.

Only manual and mechanical approaches would be used to manage vegetation under the BFFIP. Herbicide use is not included. Table 2.4-3 identifies the techniques available in the vegetation management toolbox. The district would also employ a series of BMPs for each management activity undertaken.

Table 2.4-3 Vegetation Management Toolbox

Category	Application	Techniques
1	Sites of 5 acres or larger	Prescribed burning without pre-treatment of adult plants (grasslands only) [a,b]
		Prescribed burning after cutting of shrubs and limbing trees with powered hand equipment and/or heavy equipment [a,b]
		Cutting or mowing with heavy equipment [a,b,c]
		Cutting plants with powered hand equipment [a,b,c]
		Mulching [c]
2	Small-scale treatments, or where extreme care is needed (e.g., near special status species)	Pulling plants by hand or with a non-powered tool [b]
		Prescribed burning after hand-pulling plants [b]
		Scalping seedlings [b]
		Cutting with loppers [b]
		Cutting or mowing with heavy equipment [c]
		Cutting plants with powered hand equipment [c]
		Mulching [c]

Category	Application	Techniques
3	Site-specific determination; usually small and localized treatment areas; infrequently used	Cutting and Girdling [b] Mulching [b] Solarization [b] Pulling large plants with heavy equipment [b] Propane torch flaming of seedlings [b] Animal grazing [a,b]

Notes:

[a] Techniques also used for general vegetation management (non-weed) for fuelbreak construction and maintenance

[b] Techniques used for weed control

[c] Techniques used for forest management and greenhouse gas balance

2.5 PROJECT SPONSOR'S NAME AND ADDRESS

Dain Anderson, Environmental Services Coordinator
Marin Municipal Water District
220 Nellen Avenue
Corte Madera, CA 94925-1169

2.6 GENERAL PLAN DESIGNATIONS

The Mt. Tamalpais Watershed is designated as open space. The Nicasio Reservoir Lands area is designated as agricultural and open space. The Soulajule Reservoir Lands area is designated as agricultural.

2.7 ZONING

The Mt. Tamalpais Watershed area is zoned as open area. The Nicasio Reservoir Lands area is zoned as agricultural, open area, and agricultural residential planned. The Soulajule Reservoir Lands area is zoned for agricultural use.

2.8 OTHER PUBLIC AGENCIES WHOSE APPROVAL IS REQUIRED

Approval from the Bay Area Air Quality Management District (BAAQMD) is required for prescribed burning. Approval may be required by the California Department of Fish and Wildlife (CDFW), the San Francisco Bay Regional Water Quality Control Board (SFRWQCB), and U.S. Army Corps of Engineers (ACOE) if some BFFIP activities occur within the waters located on MMWD lands.

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3 ENVIRONMENTAL CHECKLIST

3.1 INTRODUCTION

This IS includes analyses of the 18 environmental areas listed below and the mandatory findings of significance. These issue areas incorporate the topics presented in CEQA's Environmental Checklist (identified in Appendix G to the CEQA Guidelines).

- Aesthetics
- Agriculture and Forestry Resources
- Air Quality
- Biological Resources
- Cultural Resources
- Geology and Soils
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Mineral Resources
- Noise
- Population and Housing
- Public Services
- Recreation
- Transportation and Traffic
- Tribal Cultural Resources
- Utilities and Services Systems

3.2 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below could potentially be affected by implementation of the BFFIP. Impacts to biological resources, greenhouse gases, and impacts described in the Mandatory Findings of Significance are "potentially significant." All the other checked environmental factors could be mitigated to less than significant levels.

☒ Aesthetics	☐ Agriculture and Forestry Resources	☒ Air Quality
☒ Biological Resources	☒ Cultural Resources	☒ Energy Use
☒ Geology and Soils	☒ Greenhouse Gas Emissions	☒ Hazards and Hazardous Materials
☒ Hydrology and Water Quality	☐ Land Use and Planning	☐ Mineral Resources
☒ Noise	☐ Population and Housing	☐ Public Services

☒ Recreation	☒ Transportation and Traffic	☒ Tribal Cultural Resources
☐ Utilities and Service Systems	☒ Mandatory Findings of Significance	

3.3 ENVIRONMENTAL DETERMINATION

On the basis of this initial evaluation:

I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared. ☐

I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared. ☐

I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required. ☒

I find that the proposed project MAY have a "potentially significant impact" or "potentially significant impact unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed. ☐

I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required. ☐

_____ _____

Dain Anderson
Environmental Services Coordinator
Marin Municipal Water District

Date

3.4 FOCUSED EIR CONTENT

This IS will be used to focus the content of the EIR on the resources where implementation of the BFFIP could result in impacts that are potentially significant, including resources where these impacts can be mitigated. Table 3.4-1 summarizes the resources and topics that are currently anticipated to be addressed in the EIR based on the impact assessment provided in Section 3.5 of this IS. Topics may be adjusted based on agency and public feedback on this IS during the scoping period.

Table 3.4-1 Anticipated Content of the EIR

Resources	Included in the EIR	Impact/Topic to be Addressed n the EIR
Aesthetics	Yes	• Impacts to scenic vistas • Impacts to visual quality of the project site and its surroundings
Agriculture and Forestry Resources	No	• N/A
Air Quality	Yes	• Conflicts with an applicable air quality plan • Violations of air quality standard or contributions to an existing or projected air quality violation • Cumulatively considerable net increase of criteria pollutant for which the project region is in nonattainment under an applicable federal or state ambient air quality standard
Biological Resources	Yes	• Impacts to special-status species • Impacts to sensitive natural communities • Impacts to federally protected wetlands and waters • Impacts to habitat used by migratory wildlife
Cultural Resources	Yes	• Loss of archeological resources • Loss of historic resources • Loss of paleontological resources • Disturbance of human remains
Geology and Soils	Yes	• Erosion
Greenhouse Gases	Yes	• Greenhouse gas emissions • Carbon sequestration impacts
Hazards and Hazardous Materials	Yes	• Transport, use, or disposal of hazardous materials (fuels) • Accidental spill of hazardous materials (fuels) • Toxic air contaminants near sensitive receptors • Impacts from construction within the vicinity of open hazardous sites • Risks to life and property from wildland fires • Impacts to emergency access
Hydrology and Water Quality	Yes	• Violation of water quality standards • Alteration of drainages resulting in erosion or sedimentation
Land Use and Planning	No	• N/A
Mineral Resources	No	• N/A

Resources	Included in the EIR	Impact/Topic to be Addressed n the EIR
Noise	Yes	• Temporary periodic increase in ambient noises levels in the project area that are a nuisance to recreationalists and residents
Population and Housing	No	• N/A
Public Services	No	• N/A
Recreation	Yes	• Impacts on recreational experience and use
Traffic and Transportation	Yes	• Traffic hazards • Impacts to emergency access
Tribal Cultural Resources	Yes	• Potential impacts to tribal cultural resource, as defined in the Public Resource Code section 21074
Utilities and Service Systems	No	• N/A

3.5 IMPACT ASSESSMENT

3.5.1 Aesthetics

Would the project:	Potentially Significant Impact	Less than Significant Impact with Mitigation	Less than Significant Impact	No Impact
A) Have a substantial adverse effect on a scenic vista?	☐	☒	☐	☐
B) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway or designated scenic roadway?	☐	☐	☒	☐
C) Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☒	☐	☐
D) Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?	☐	☐	☐	☒

A, C. Less Than Significant with Mitigation. Scenic vistas are found throughout MMWD's lands and are primarily experienced by recreationalists. Implementation of the BFFIP could have both temporary and permanent impacts to scenic vistas and to the overall existing visual quality of the watersheds, but these impacts would be less than significant with mitigation.

Equipment and maintenance crews performing activities such as vegetation removal and habitat restoration would be periodically visible in areas throughout MMWD's lands. Fire and smoke may be visible from scenic vistas during prescribed burns; however, prescribed burns would be performed in accordance with a Prescribed Burn Plan with a smoke management element. Activities in the BFFIP would occur on a periodic and temporary basis and would be limited to small crews, like those used for existing maintenance and other operations and, therefore, would not significantly impact scenic vistas within MMWD's lands.

Permanent alterations to portions of MMWD lands could result from several activities, including creation of additional fuelbreaks, tree and vegetation thinning and removal for treatment of forest diseases, implementation of restoration plans, and removal of invasive weed species over large areas. The overall view of the landscape from scenic vistas, however, would remain natural, as the BFFIP activities do not include the construction of manmade elements or dramatic alteration of landscape. Much of the fuelbreak system has already been created and is part of the existing landscape. Thinning of vegetation and the visibility of cleared areas could still have negative visual impacts for some viewers. Impacts will be addressed in the EIR.

Mitigation could be implemented to minimize the contrast of managed and unmanaged natural areas. Vegetation removal for fire hazard reduction would follow guidelines to reduce the

visual impact, such as avoiding straight-line boundaries and other strong linear configurations that tend to detract from the natural appearance, following natural or existing landscape features, and feathering fireline edges into the natural landscape. Charring and ashes from prescribed burns would be minimized. Permanent impacts to scenic vistas, therefore, would be less than significant with mitigation.

Activities in the BFFIP could also have a positive impact on scenic vistas. The BFFIP would result in habitat restoration in several places because of recontouring slopes, removing accumulated thatch, planting native species, removing invasive species, and addressing Sudden Oak Death and other forest diseases that have visibly impacted the tree canopy. These activities would enhance the natural aesthetic value of MMWD's lands and would be a positive impact on scenic vistas and the general aesthetic quality in the area.

Conclusion: Impacts to scenic vistas and visual quality of the project site and its surroundings will be addressed in the EIR, but are anticipated to be less than significant with mitigation.

B. Less than Significant Impact. No officially designated state scenic highways are in Marin County (Caltrans 2016). Highway 1 in Marin County, which is located west of the plan area, is an eligible state scenic highway (Caltrans 2016); however, none of MMWD lands are visible from Highway 1. The only BFFIP activity that could be visible from Highway 1 is the smoke from prescribed burns. This impact would be temporary, lasting only for the duration of the burn, and would be dependent on the location of the burn. Any visible smoke would be minor because prescribed burns and pile burns would generate small plumes, and would only be seen from Highway 1 over a ridgeline. Impacts would be less than significant and the topic of impacts to scenic resources will not be evaluated further in the EIR.

Conclusion: No additional analysis of scenic resources is required.

D. No Impact. Activities in the BFFIP would be performed during the day and would not require artificial lighting. Glare from equipment needed to implement various activities is not anticipated. No permanent lighting would be added as part of the BFFIP's implementation. Implementation of the BFFIP would not create a new source of substantial light or glare.

Conclusion: No additional analysis of light and glare is required.

3.5.2 Agriculture and Forestry Resources

Would the project:	Potentially Significant Impact	Less than Significant Impact with Mitigation	Less than Significant Impact	No Impact
A) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to nonagricultural use?	☐	☐	☐	☒

Would the project:	Potentially Significant Impact	Less than Significant Impact with Mitigation	Less than Significant Impact	No Impact
B) Conflict with existing zoning for agricultural use or a Williamson Act contract?	☐	☐	☐	☒
C) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined in Public Resource Code section 4526), or timberland zoned Timberland Production (as defined in Government Code section 51104 (g))?	☐	☐	☐	☒
D) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
E) Involve other changes in the existing environment that, due to their location or nature, could result in conversion of Farmland to nonagricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒

A, B, E. No Impact. MMWD watershed lands contains no agricultural uses; therefore, no impacts to agricultural lands would occur. The topic of agriculture impacts will not be evaluated further in the EIR.

C. No Impact. The state Public Resource Code Section 12220 defines forest land as land that can support ten percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources including biodiversity, water quality, and recreation. Forests within MMWD lands meet the definition made in the Public Resource Code.

The BFFIP does not propose rezoning or any change in function and use of the forests on MMWD land In fact, the plan supports a commitment to improving the health of the forests. No forests on MMWD lands would be converted to non-forest use. While the BFFIP would involve management activities that would result in the change in composition and density of trees and vegetation within the forest, no forest land would be lost. There would be no impact on forest land.

D, E. No Impact. Implementation of the BFFIP would not result in the conversation of forest land to non-forest use. The BFFIP would require the implementation of activities within forests, including tree thinning, prescribed burning, and removal of invasive species. These activities would not result in the conversion of forest to non-forest lands and would generally improve the health of the forest. No impact would occur and the topic of impacts to forest lands will not be evaluated further in the EIR.

Conclusion: No additional analysis of agricultural and forestry resources is required.

3.5.3 Air Quality

Would the project:	Potentially Significant Impact	Less than Significant Impact with Mitigation	Less than Significant Impact	No Impact
A) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☒	☐	☐
B) Violate any air quality standard or contribute substantially to an existing or projected air quality violation (e.g., induce mobile source carbon monoxide (CO) emissions that would cause a violation of the CO ambient air quality standard)?	☐	☒	☐	☐
C) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors)?	☐	☒	☐	☐
D) Expose sensitive receptors to substantial pollutant concentrations?	☐	☒	☐	☐
E) Create objectionable odors affecting a substantial number of people?	☐	☐	☒	☐

A, B, C, D. Less than Significant with Mitigation. The potential effects of the proposed project on air quality will be evaluated in the EIR. Heavy equipment used for projects and prescribed and pile burning could cause temporary air quality impacts. The amount of emissions will be quantified in the EIR. Mitigation will be included to minimize potentially significant impacts to air quality, including implementation of best management practices (BMPs), limitations on controlled burns, implementation of Prescribed Burn Plans, and use of standard emission control devices for construction equipment. These topics will be evaluated in the EIR.

Conclusion: Additional analysis is required to evaluate the potential impacts from proposed project emissions, but it is anticipated that the impact would be less than significant after mitigation.

E. Less than Significant Impact. With respect to creating objectionable odors affecting a substantial number of people, odorous substances are regulated under the Bay Area Air Quality Management District (BAAQMD) Regulation 7. This regulation prohibits the emission of odorous compounds that remain odorous after dilution with a specified quantity of odor-free air. The only activity within the BFFIP that could generate objectionable odors would be prescribed burning. Prescribed burns would be local and temporary and Prescribed Burn Plans would include measures for smoke management, thus minimizing the extent of odor dispersion. Burns would not occur in close vicinity to residences and populated areas. Odors would dissipate and would not likely reach sensitive receptors. Visitors within MMWD's lands

could be exposed temporarily to these odors; however, the impacts would be temporary and may not be objectionable to all (odors would be like that of a campfire). Impacts from odors are anticipated to be less than significant and will not be discussed further in the EIR.

Conclusion: No additional analysis is required to address objectionable odors.

3.5.4 Biological Resources

Would the project:	Potentially Significant Impact	Less than Significant Impact with Mitigation	Less than Significant Impact	No Impact
A) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or the U.S. Fish and Wildlife Service?	☒	☐	☐	☐
B) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife or the U.S. Fish and Wildlife Service?	☐	☒	☐	☐
C) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☒	☐	☐
D) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☒	☐	☐
E) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒
F) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒

A. Potentially Significant Impact. Approximately 50 special-status plants species are known or are likely to occur on MMWD lands, including seven listed as rare, threatened, or endangered at the federal or state level. Approximately 45 special-status wildlife species (invertebrates, fish, amphibians, reptiles, birds, and mammals) could potentially occur on MMWD lands or in

waters on MMWD lands. Direct impacts to special-status plants and animals could occur if a special-status wildlife species were injured or killed during heavy equipment use, tree trimming or removal, or prescribed burning. Indirect impacts to special-status plants and wildlife could result from alteration of habitat through vegetation management, restoration activities, and sedimentation that impact the health and reproductive success of aquatic special-status species

The EIR will include additional characterization of the species that could occur and the direct and indirect effects on these species from the various activities described in the BFFIP. Mitigation is anticipated to reduce effects; the EIR will address whether these impacts could be mitigated to less than significant levels. Potential mitigation could include the following:

- Limiting the timing of use of noise-generating and ground-disturbing equipment in areas of special-status plant and wildlife species (e.g., northern spotted owl) to outside the breeding season
- Performing surveys for nesting birds and roosting bats and avoiding tree removal and trimming in proximity to active nests or roosts (distance dependent on conditions and species)
- Limiting or avoiding the use of prescribed burning and grazing in areas where special-status plants and animals are known to occur after confirming presence of these species through surveys
- Using erosion control measures such as straw wattles and silt fencing for any ground-disturbing work near waterways or downstream of prescribed burn areas

U.S. Fish and Wildlife Service, National Marine Fisheries Service, U.S. Army Corps of Engineers, and California Department of Fish and Game will be consulted during preparation of the EIR to develop additional protection measures for special-status species.

Implementation of the BFFIP is anticipated to be beneficial to special-status wildlife by increasing biodiversity and reducing fire hazards that could otherwise devastate habitat. Removal of certain nonnative species and treatment of forest diseases would improve habitat quality and reduce ecosystem disrupters. Fires, while often a part of the natural lifecycle of an ecosystem, can pose threats to biological resources that are already adversely impacted by other factors. Plants with low populations may be pushed into local extinction by wildfires. Large wildfires can also impact animal species and can increase sediment runoff, which affects riparian systems. Fire hazard management, as part of the BFFIP, would help to reduce these risks.

B, C, D. Less than Significant with Mitigation. The plan area contains various sensitive vegetation communities, watercourses classified as potentially jurisdictional, and habitat used by migratory wildlife. Direct impacts to sensitive vegetation communities, potentially jurisdictional waters, and habitat for migratory wildlife could occur from vegetation management activities and prescribed burning and indirect impacts could occur from erosion or sedimentation that results in water quality impacts. The EIR will include a discussion of impacts to sensitive vegetation communities, potentially jurisdictional waters, and habitat for migratory

wildlife. Activities in the BFFIP will generally improve the quality of sensitive vegetation communities and habitats from the removal of invasive weeds and treatment of forest diseases.

Impacts are anticipated to be less than significant with mitigation. BMPs would be implemented in areas of ground disturbance or downstream of controlled burns to minimize sedimentation of waterways and impacts to riparian habitat. Mitigation may include placement of temporary structures (e.g. straw wattles) in streams or other water bodies to reduce impacts of activities taking place on stream banks or near wetlands. Mitigation could include surveying for nesting birds within a specific buffer for each species and avoiding tree removal and noise-generating activities in proximity to nesting birds. Mitigation could include timing activities outside of migration seasons and/or moving fish around work areas.

Conclusion: Potential impacts to sensitive vegetation communities, potentially jurisdictional waters, and habitat for migratory wildlife will be discussed in the EIR and are anticipated to be less than significant with mitigation.

E. No Impact. Marin County Code Chapter 22.27 governs the removal of protected trees within Marin County through the Marin County Native Tree Protection and Preservation OrdinanceBFFIP

This ordinance prohibits the removal of native trees in the County without first receiving a tree removal permit. Tree protection and preservation applies to "protected trees" as defined in Article VIII of the code. Article VIII refers to a list of "Trees Native to Marin County" that is maintained by the Marin Community Development Agency – Planning Division. The provisions of the Development Code prohibit the removal of a "protected tree" without first requesting and receiving a tree removal permit. MMWD, however, would be exempt from obtaining a tree removal permit under Section 22.62.040 that states "The removal of any protected or heritage tree on a lot is exempt from the requirements of this Chapter if it meets at least one of the following criteria for removal… The tree removal is by a public agency to provide for the routine management and maintenance of public land or to construct a fuel break." No impacts would occur.

Conclusion: No additional analysis is required to evaluate conflicts with the County's tree ordinance.

F. No Impact. No natural community conservation plans (NCCP), or other applicable habitat conservation plan (HCP) cover the BFFIP area. The topic of conflicts with a NCCP or HCP will not be analyzed in the EIR.

Conclusion: No additional analysis is required to address impacts from conflicts with a NCCP or HCP, including protecting water supply, sustaining and restoring natural wildlife characteristics.

3.5.5 Cultural Resources

Would the project:	Potentially Significant Impact	Less than Significant Impact with Mitigation	Less than Significant Impact	No Impact
A) Cause a substantial adverse change in the significance of an archaeological resource as defined in Section 15064.5?	☐	☒	☐	☐
B) Cause a substantial adverse change in the significance of a historic resource pursuant to Section 15064.5?	☐	☒	☐	☐
C) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☒	☐	☐
D) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☒	☐	☐

A. Less than Significant with Mitigation. Implementation of the BFFIP would not cause direct alterations or changes to structures that are or could be historical. The BFFIP does not require alterations to any existing structures on MMWD lands. It is possible that BFFIP activities could take place in previously undisturbed areas and could uncover and/or damage previously unknown historical resources. Prescribed burns and use of heavy equipment could also affect historical resources. The EIR will address the potential likelihood of encountering historical resources across MMWD's lands and will describe the potential effects to those resources.

Mitigation could include requiring surveys prior to ground disturbance or prior to conducting controlled burns in areas of high sensitivity for historical resources. Historical resources would be avoided or would be evaluated by a qualified historian. It is likely that impacts would be less than significant with mitigation.

Conclusion: Potential impacts to historical resources will be discussed in the EIR, but are anticipated to be less than significant with mitigation.

B. Less than Significant with Mitigation. Vegetation management actions could affect archaeological resources through ground disturbance or passive weed control measures. Ground disturbance is also planned as part of habitat restoration activities. Previously undiscovered archaeological resources may be unearthed during ground-disturbing activities. The EIR will include a discussion of the potential likelihood of encountering archaeological resources across MMWD's lands and will include a description of the potential effects to those resources.

Mitigation could include requiring surveys prior to ground disturbance or prior to conducting controlled burns in areas of high sensitivity for archaeological resources. Known archaeological resources would be avoided or else evaluated by a qualified archaeologist. It is likely that impacts would be less than significant with mitigation.

Conclusion: Potential impacts to archeological resources will be discussed in the EIR, but are anticipated to be less than significant with mitigation.

C. Less than Significant with Mitigation. Implementation of the BFFIP would not result in impacts to unique geologic resources, as the BFFIP activities would not involve substantial changes to topography or substantial ground-disturbing work beyond the uppermost layers of soil. The BFFIP's implementation is not expected to involve alterations to rock outcrops or other large earth-moving activities. Impacts to unique geologic resources would be less than significant.

Activities in the BFFIP, particularly mechanical treatment methods such as the use of heavy equipment for vegetation removal, could potentially impact paleontological resources through damage to the resource from heavy equipment use. Activities in the BFFIP could include recontouring and other activities that could affect the uppermost layers of soil. The EIR will include a discussion that addresses the potential likelihood of encountering paleontological resources across MMWD's lands and will describe the potential effects to those resources. Mitigation could require that work in the area would stop and the University of California Museum of Paleontology contacted to determine the course of action if a paleontological resource is uncovered during BFFIP activities. Workers performing ground-disturbing activities would also be trained to recognize potential paleontological resources. It is likely that impacts would be less than significant with mitigation.

Conclusion: Potential impacts to planetological resources will be discussed in the EIR, but are anticipated to be less than significant with mitigation.

D. Less than Significant Impact with Mitigation. Implementation of the BFFIP is unlikely to result in disturbance of undiscovered human remains, as human remains are not expected to be discovered on MMWD lands during BFFIP implementation. Human remains are not known to occur in work areas, and the BFFIP activities would disturb only the uppermost layers of soil. If human remains were unearthed during BFFIP activities, a significant impact could occur. Mitigation would require the proper procedures to be followed to ensure that the remains are handled to avoid impacts. Mitigation would require that the Marin County Coroner be contacted and the Native American remains be dispositioned in compliance with CEQA Guidelines section 15064.5(e). Impacts from disturbance of any human remains would, therefore, be less than significant with mitigation. This topic would be addressed in the EIR.

Conclusion: Additional analysis and mitigation regarding the potential for discovery of human remains will be addressed in the EIR.

3.5.6 Geology and Soils

Would the project:	Potentially Significant Impact	Less than Significant Impact with Mitigation	Less than Significant Impact	No Impact
A) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☐	☒
ii) Strong seismic ground-shaking?	☐	☐	☐	☒
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☐	☒
iv) Landslides?	☐	☐	☒	☐
B) Result in substantial soil erosion or the loss of topsoil?	☐	☒	☐	☐
C) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	☐	☐	☒	☐
D) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	☐	☐	☐	☒
E) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	☒

A. i, ii, iii. No Impact. Implementation of the BFFIP would not result in construction of structures and would not introduce a substantially greater number of people within the plan area than ongoing activities. Implementation of BFFIP activities would, therefore, not expose people or structures to strong seismic ground shaking, including from being located on an active fault or from seismic related ground failure, including liquefaction. These topics will not be evaluated further in the EIR.

Conclusion: No additional analysis of impacts from exposing people or structures to strong seismic ground shaking, including from being located on an active fault or from seismic related ground failure, including liquefaction is required.

A. iv, C. Less than Significant Impact. Landslides have been mapped on MMWD lands. The proposed project would not involve the construction of structures and, therefore, would not expose structures or people to substantial adverse effects related to landslides. Implementation of activities in the BFFIP may, however, increase the risk of landslides because it would involve activities that could decrease slope stability. The main factors affecting slope stability are steepness, soil type, underlying geologic structure and type, vegetation, subsurface water content, and human activity such as excavation. The BFFIP involves vegetation removal, which could increase subsurface water content and would result in direct loss of root systems that tend to stabilize soil. These potentially destabilizing activities could result in a landslide. Seismically induced landslides, depending on location, could pose a risk to trails and roads in the plan area. However, given the limited human presence and lack of structures that could be at risk from a landslide, and the otherwise natural occurrence of landslides in the surrounding terrain, impacts would be less than significant. The topic of seismically-induced landslides will not be evaluated further in the EIR.

Conclusion: No additional analysis of impacts from seismically-induced landslides is required.

B. Less than Significant with Mitigation. Implementation of the BFFIP could result in soil erosion in several ways. Implementation of the BFFIP involves vegetation removal, which could result in increased soil erosion. Vegetation removal can loosen soil due to loss of the root system, making soil more prone to transportation by surface water or wind. Changes in slope as a byproduct of physical removal of vegetation can also increase erosion. The EIR will include a discussion that addresses the potential loss of topsoil and mitigation to minimize any adverse effects.

Mitigation could include implementation of erosion control BMPs in areas where ground disturbance or controlled burning is implemented. Mitigation could also require restoration of treated areas by methods such as ground compaction, revegetation (as feasible), or other appropriate methods to reduce erosion after BFFIP activities have been completed. Impacts are anticipated to be less than significant with mitigation.

Conclusion: Erosion impacts will be discussed in the EIR, but are anticipated to be less than significant with mitigation.

D. No Impact. Implementation of the proposed project would not result in effects related to expansive or collapsible soils. Expansive soil impacts affect structures built on top of expansive soils. The BFFIP would not involve the construction of structures and, therefore, would not increase risks to life or property from construction on expansive or collapsible soils. No impact would occur and the topic of impacts from expansive soils will not be evaluated further in the EIR.

Conclusion: No additional analysis of impacts from expansive soils is required.

E. No Impact. Implementation of the BFFIP would not involve the use of septic tanks or the use of alternative wastewater disposal systems. No impact would occur and the topic of impacts

from the use of septic tanks or alternative wastewater disposal system will not be evaluated further in the EIR.

Conclusion: No additional analysis of impacts from the use of septic tanks or alternative wastewater disposal system is required.

3.5.7 Greenhouse Gas Emissions

Would the project:	Potentially Significant Impact	Less than Significant Impact with Mitigation	Less than Significant Impact	No Impact
A) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☒	☐	☐
B) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emission of greenhouse gases?	☒	☐	☐	☐

A. Less than Significant with Mitigation. Implementation of the BFFIP would result in greenhouse gas (GHG) emissions from operation of worker vehicles, operation of heavy equipment that uses diesel fuel, operation of fuel-powered vegetation removal equipment, and prescribed burning. Proposed vegetation management activities, such as tree thinning, may affect the ability of the forests on MMWD lands to sequester greenhouse gas. Significance thresholds, an estimation of emissions, and mitigation, as necessary, will be included and analyzed in the EIR. It is anticipated that mitigation, such as limiting equipment usage or prescribed burns within each year of implementation, would reduce impacts to less than significant levels.

Conclusion: Additional analysis is required to evaluate the impact from greenhouse gas emissions and impacts on carbon sequestration, but it is anticipated that the impact would be less than significant with mitigation.

B. Potentially Significant. Marin County establishes policies for GHG reductions in the Marin County Climate Action Plan (Marin County 2015). The activities listed above could potentially result in conflicts with the policies established in the Climate Action Plan. Potential conflicts with the Climate Action Plan will be analyzed in the EIR. MMWD also has a Greenhouse Gas Emissions Reduction Program that established a goal of GHG emissions reductions of 15 percent from 1990 levels by 2020. The plan established baseline GHG levels. Activities for vegetation management may generate GHG emissions greater than anticipated in the plan. Mitigation such as limiting equipment usage or prescribed burns within each year of implementation, would likely reduce impacts, but impacts may remain significant.

Conclusion: Additional analysis is required to evaluate the impact from conflicts with the applicable Climate Action Plan and MMWD's Greenhouse Gas Emissions Reduction Program.

3.5.8 Hazards and Hazardous Materials

Would the project:	Potentially Significant Impact	Less than Significant Impact with Mitigation	Less than Significant Impact	No Impact
A) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☒	☐	☐
B) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☒	☐	☐
C) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school?	☐	☒	☐	☐
D) Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code section 65962.5 and, as a result, create a significant hazard to the public or the environment?	☐	☒	☐	☐
E) For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, result in a safety hazard for people residing or working in the project corridor?	☐	☐	☐	☒
F) For a project located within the vicinity of a private airstrip, result in a safety hazard for people residing or working in the project corridor?	☐	☐	☐	☒
G) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
H) Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☒	☐	☐

A, B. Less than Significant with Mitigation. Truck traffic and the use of equipment for activities such as scalping and mowing vegetation could potentially lead to fuel leaks and spills. Implementation of the BFFIP would also include use and transport of fuels. Vehicles would be kept in good working order, and any fuel spills would be handled per MMWD's District-wide Spill Prevention, Control, and Countermeasure (SPCC) plan that covers all facilities that use chemicals, diesel, and gasoline. Contractors are also subject to certain safety guidelines and

guidelines related to hazards encountered during work. The potential impact from spills would be less than significant after implementation of SPCC mitigation.

Herbicides will not be used in the implementation of the BFFIP; therefore, there are no hazardous impacts from herbicides from the implementation of the BFFIP.

Conclusion: Hazardous material use and potential spills will be discussed in the EIR, but are anticipated to be less than significant with mitigation.

C. Less than Significant with Mitigation. The closest school to the BFFIP area is Fairfax San Anselmo Children's Center in Deer Park, located approximately 0.31 mile from the boundary of MMWD lands. It is likely that some construction activities, such as fuelbreak construction, maintenance activities, and weed removal would occur within 0.25 mile of the Fairfax San Anselmo Children's Center. Potential spills of fuels, as described above in Impact A and B, could potentially affect the Fairfax San Anselmo Children's Center. The potential impact from spills would be less than significant after implementation of an SPCC. Equipment using diesel could release emissions that would affect sensitive receptors at Fairfax San Anselmo Children's Center. The topic of impacts to sensitive receptors from hazardous emissions will be evaluated in the EIR.

Conclusion: Potential hazardous emissions impacts near schools will be discussed in the EIR, but are anticipated to be less than significant with mitigation.

D. Less than Significant with Mitigation. Multiple open hazardous sites are located within the Mount Tamalpais Watershed. The Mill Valley Air Force Station is considered an open hazardous site and is located within the Mount Tamalpais Watershed. The impacts from construction near the Mill Valley Air Force Station and additional potential open hazardous sites will be addressed in the EIR. Mitigation will be defined in the EIR to reduce exposure of workers to contamination at this location and to ensure that work performed at the location does not exacerbate existing contamination or interfere with remediation efforts. Impacts would be less than significant with mitigation.

Conclusion: Potential impacts from construction within the vicinity of an open hazardous site will be discussed in the EIR, but are anticipated to be less than significant with mitigation.

E. F. No Impact. The plan area is not located within an area with an airport land use plan or within the vicinity of a private airstrip. Implementation of the BFFIP would not result in a safety hazard from being located near public airports or private airstrips. No impact would occur and the topic of hazard impacts associated with a project being located within the vicinity of a public airport or private airstrip will not be evaluated further in the EIR.

Conclusion: No additional analysis of impacts associated with a project being located within the vicinity of a public airport or private airstrip is required.

G. Less than Significant with Mitigation. Implementation of the BFFIP could result in temporary road closures for projects taking place near or adjacent to roads. The EIR will contain

a discussion of emergency access issues. Mitigation measures could require that emergency agencies be informed of any complete road closures. No adverse impacts would occur with mitigation.

Work crew vehicles would not be parked in a way that blocks access routes and implementation of the BFFIP would improve overall emergency access along fuelbreaks and fire roads. The BFFIP would expand ingress and egress fuelbreaks, which are fuelbreaks on both sides of roads identified as critical for emergency vehicle passage.

Conclusion: Emergency access impacts will be discussed in the EIR, but are anticipated to be less than significant with mitigation.

H. Less than Significant with Mitigation. Implementation of the BFFIP would have a beneficial impact on wildland fire risks. The BFFIP would implement actions that would reduce the fire hazard on MMWD lands. Over 25,000 structures housing approximately 45,000 residents are within two miles of the Mount Tamalpais Watershed along a wildland-urban interface (WUI) that has a California Department of Forestry Protection (CalFire) rating of "High" to "Very High" (Calfire 2007). Six incorporated cities (Corte Madera, Fairfax, Larkspur, Mill Valley, Ross, and San Anselmo) and six unincorporated communities (Forest Knolls, Kentfield, Lagunitas, San Geronimo, Stinson Beach, and Woodacre) are adjacent to Mount Tamalpais Watershed lands. The ramifications of even small wildfires reaching urban areas are potentially devastating. The BFFIP would include completion of fuelbreaks and ongoing maintenance of the fuelbreak system to reduce the potential for wildfires and to control their spread. These actions would have a positive impact and would reduce the risk of wildland fires on MMWD lands. The reduction of wildland fire risk on MMWD lands would also reduce the risk of wildland fires spreading to residences and structures outside of MMWD lands.

Maintenance activities could induce fires from using equipment that can generate sparks in vegetated areas. Impacts related to the potential to generate wildfires will be addressed in the EIR and mitigation proposed, as necessary.

The use of prescribed burns carries a very low risk of becoming unmanageable. Use of Prescribed Burn Plans, which would dictate the conditions of a prescribed burn, and coordination with local fire departments for prescribed burns would reduce these impacts. Prescribed burns would not take place adjacent to urban areas. Impacts would be less than significant with mitigation. Impacts to life and property from wildfires will be addressed in the EIR.

Conclusion: The potential for the proposed project to result in a wildfire will be discussed in the EIR, but is anticipated to be less than significant with mitigation.

3.5.9 Hydrology and Water Quality

Would the project:	Potentially Significant Impact	Less than Significant Impact with Mitigation	Less than Significant Impact	No Impact
A) Violate any water quality standards or waste discharge requirements?	☐	☒	☐	☐
B) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of existing nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☒	☐
C) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on or off site?	☐	☒	☐	☐
D) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on or off site?	☐	☒	☐	☐
E) Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☐	☒	☐	☐
F) Otherwise substantially degrade water quality?	☐	☒	☐	☐
G) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	☐	☒
H) Place within a 100-year flood hazard area structures that would impede or redirect flood flows?	☐	☐	☐	☐
I) Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☐	☒
J) Cause inundation by seiche, tsunami, or mudflow?	☐	☐	☐	☒

A, F. Less than Significant with Mitigation. Implementation of the BFFIP would involve activities that could indirectly impact water quality, such as prescribed burning, removal of vegetation, and use of fuels. Prescribed burning and vegetation removal could result in increased erosion and runoff, which may cause increased siltation in waterways. Fuels could also run off into waterways. Impacts to water quality from implementation of the BFFIP will be addressed in the EIR.

Mitigation to minimize erosion and sedimentation of waterways could include implementation of erosion control BMPs downstream of areas of ground disturbance and controlled burns. Implementation of a Spill Prevention, Control, and Countermeasure plan would minimize the potential for fuel and other chemicals used in equipment maintenance from reaching waterways. Impacts to water quality are anticipated to be less than significant with mitigation.

Implementation of the BFFIP is not anticipated to result in violations of waste discharge requirements. The BFFIP would not involve the production of wastewater. There would be no impact related to waste discharge requirements

Conclusion: Impacts to water quality from erosion, siltation, and from accidental spills of fuels will be addressed in the EIR, but are anticipated to be less than significant with mitigation.

B. Less than Significant. The California Department of Water Resources has delineated groundwater basins and subbasins in California. MMWD lands are in the San Francisco Bay hydrologic region (California Department of Water Resources 2016). Three groundwater subbasins (Ross Valley, San Rafael, and Novato) are located near but not on BFFIP lands (MMWD 2016). MMWD currently does not use groundwater because of limited groundwater production capabilities in the area. Groundwater use is limited to small, domestic use through private groundwater pumping wells.

Implementation of the BFFIP would not result in impacts related to depletion of groundwater supplies. Implementation of the BFFIP would not require the use of substantial groundwater from the project area. Activities conducted under theBFFIP would instead utilize MMWD waters for project purposes, including for emergency water storage at prescribed burns or for irrigation of restoration areas. MMWD water supplies come from reservoirs that may have some impact on groundwater supplies. The amount of water used for implementation of the BFFIP would be so minimal that impacts to groundwater supplies would be less than significant. The topic of groundwater impacts will not be evaluated further in the EIR.

Conclusion: No additional analysis of groundwater impacts is required.

C, D, E. Less than Significant with Mitigation. Implementation of the BFFIP would not result in any permanent changes to streams or rivers; however, vegetation management activities, including tree thinning, weed removal, and prescribed burning could result in minor alterations in drainage patterns due to loss of roots or exposure of soils. The potential impact from increased runoff, including flooding and erosion, will be addressed in the EIR. Mitigation would be implemented to minimize potential impacts.

Mitigation to minimize erosion and sedimentation of waterways could include implementation of erosion control BMPs downstream of areas of ground disturbance and controlled burns. Mitigation, such as use of bioswales, may be implemented and could temporarily alter drainage patterns. The changes, however, are not anticipated to result in increased surface runoff that could result in flooding because they would not substantially alter drainage and drainage alterations, such as mitigation for erosion, would be temporary.

Conclusion: Impacts from increased runoff will be addressed in the EIR, but are anticipated to be less than significant with mitigation.

G. No Impact. Implementation of activities in the BFFIP would not include construction of housing. There would be no impact related to housing in 100-year flood hazard areas and the topic of impacts from placement of housing within 100-year flood hazard areas will not be evaluated further in the EIR.

Conclusion: No additional analysis of impacts from placement of housing within 100-year flood hazard areas is required.

H. Less than Significant Impact. Implementation of the BFFIP would not involve construction of permanent structures, but mitigation may require bioswales or other such water treatment methods that could affect surface flow. Such structures would be designed so as not to affect flood flows. Impacts would be less than significant and the topic of flood impacts will not be evaluated further in the EIR.

Conclusion: No additional analysis of flood impacts are required.

I. No Impact. The proposed project would not involve alterations to any of the dams on MMWD lands. The BFFIP includes dam maintenance activities, including removal of woody vegetation to prevent the growth of taproots that can impair the integrity of the dam and prescribed burning. These activities would not involve substantial surface disturbance that would threaten the integrity of the dams and no impact would occur. The topic of impacts associated with dam failure will not be evaluated further in the EIR.

Conclusion: No additional analysis of impacts associated with dam failure is required.

J. No Impact. The BFFIP covers a hilly, mountainous, inland area, which precludes the chance of the area being inundated by tsunami. Activities described in the BFFIP could not cause seiches or mudflows due to the nature of the activities proposed. The topic of impacts from tsunamis or seiches will not be evaluated further in the EIR.

Conclusion: No additional analysis of tsunami or seiche impacts is required.

3.5.10 Land Use and Planning

Would the project:	Potentially Significant Impact	Less than Significant Impact with Mitigation	Less than Significant Impact	No Impact
A) Physically divide an established community?	☐	☐	☐	☒
B) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☒
C) Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	☒

A. No Impact. The BFFIP would not involve the construction of any dividing structure or its functional equivalent, and there are no communities within the plan area that could be physically divided. No impact would occur and the topic of dividing an established community will not be evaluated further in the EIR.

B. No Impact. Implementation of the BFFIP would not conflict with land use policies or plans. The BFFIP would not alter current land uses and thus would not conflict with the zoning or general plan designations. No impact would occur and the topic of conflicts with land use policies or plans will not be evaluated further in the EIR.

C. No Impact. There is no adopted HCP, NCCP, or other approved conservation plan covering MMWD lands; therefore, implementation of the BFFIP would not conflict with any applicable HCP or NCCP. No impact would occur and the topic of conflicts with HCPs and NCCPs will not be evaluated further in the EIR.

Conclusion: No additional analysis of conflicts with land use is required.

3.5.11 Mineral Resources

Would the project:	Potentially Significant Impact	Less than Significant Impact with Mitigation	Less than Significant Impact	No Impact
A) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
B) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	☐	☐	☐	☒

A, B. No Impact. The proposed project would not involve activities that would permanently impede mineral recovery, as it would not involve placement of permanent structures on MMWD lands. No impact would occur and the topic of impacts to mineral resources will not be evaluated further in the EIR.

Conclusion: No additional analysis of mineral resources is required.

3.5.12 Noise

Would the project:	Potentially Significant Impact	Less than Significant Impact with Mitigation	Less than Significant Impact	No Impact
A) Expose persons to or generate noise levels in excess of standards established in the local general plan or noise ordinance or applicable standards of other agencies?	☐	☐	☐	☒
B) Expose persons to or generate excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
C) Result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☐	☒
D) Result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☒	☐	☐
E) For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, expose people residing or working in the project corridor to excessive noise levels?	☐	☐	☐	☒
F) For a project within the vicinity of a private airstrip, expose people residing or working in the project corridor to excessive noise levels?	☐	☐	☐	☒

A. No Impact. Implementation of the BFFIP would not result in the generation of noise that violates an ordinance or standard. The Marin County Code [Section 6.70.030 (5) (c) (ii)] exempts construction projects of public utilities from its construction activity noise ordinance; however, MMWD typically adheres to the local jurisdictions' noise ordinances in conducting land management activities. The Marin Countywide Plan sets benchmarks for allowable noise exposure from stationary noise sources (Marin County Board of Supervisors 2007). The BFFIP would not involve stationary noise sources. No impact would occur and the topic of noise impacts from conflicts with noise ordinances will not be evaluated further in the EIR.

Conclusion: No additional analysis is required to evaluate impacts from conflicts with noise ordinances.

B. Less than Significant Impact. Implementation of the BFFIP would involve the use of heavy equipment for vegetation management and operation of trucks, which could generate minor amounts of groundborne vibration. The BFFIP would not involve the use of any equipment that could generate a substantial amount of vibration, such as an impact pile driver or compactor. Caltrans synthesized the various vibration references to develop construction vibration threshold criteria (Caltrans 2013). Ground vibration dissipates within a close distance of the source and the minor vibration that would be generated by the equipment and use of trucks would not exceed the standards established by Caltrans. Vibration from trucks and bulldozers dissipate below significance thresholds after 10 feet. Construction equipment would not be used within 10 feet of buildings. Activities would be temporary and periodic and the impacts would be less than significant. Vibration impacts will not be analyzed further in the EIR.

Conclusion: No additional analysis is required to evaluate vibration impacts.

C. No Impact. Activities in the BFFIP would be temporary and periodic in nature. Implementation of the BFFIP would, therefore, not result in a substantial permanent noise increase. No impact would occur and the topic of permanent noise impacts will not be evaluated further in the EIR.

Conclusion: No additional analysis is required to evaluate permanent noise impacts.

D. Less than Significant with Mitigation. Activities in the BFFIP, such as mowing and cutting with heavy equipment, cutting with powered hand equipment, scalping with heavy equipment, mulching, and chipping could generate high levels of noise. This noise may be audible at residences close to MMWD lands and to recreational users on MMWD lands, depending on the location of BFFIP activities. Quantification of noise levels and associated impacts will be addressed in the EIR.

Mitigation could include a requirement that high-noise-generating activities take place during non-holiday weekdays to reduce noise exposure to recreational users. Mitigation could require that noisy activities be located far enough away from residences located at the WUI, such that noise levels are minimized. Impacts are anticipated to be less than significant with mitigation.

Conclusion: Temporary noise impacts will be discussed in the EIR, but are anticipated to be less than significant with mitigation.

E, F. No Impact. The plan area is not located within an area with an airport land use plan or within the vicinity of a private airstrip. Implementation of the BFFIP would not result in exposure to noise from being near public airports or private airstrips. No impact would occur and the topic of impacts associated with a project being located within the vicinity of a public airport or private airstrip will not be evaluated further in the EIR.

Conclusion: No additional analysis is required to evaluate the impact of noise impacts associated with a project being located within the vicinity of a public airport or private airstrip.

3.5.13 Population and Housing

Would the project:	Potentially Significant Impact	Less than Significant Impact with Mitigation	Less than Significant Impact	No Impact
A) Induce substantial population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure)?	☐	☐	☐	☒
B) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
C) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

A. No Impact. Implementation of the BFFIP would not induce substantial population growth. The plan does not include elements that allow for the addition of homes or businesses or the infrastructure needed to induce population growth. Implementation of the BFFIP would not require new employees to move to the area. No impact would occur and the topic of impacts associated with population growth will not be evaluated further in the EIR.

B. No Impact. Implementation of the plan would not result in construction of homes elsewhere. The BFFIP would not involve the displacement or removal of existing housing, and no replacement housing would need to be constructed. No impact would occur and the topic of housing displacement, requiring construction of new housing will not be evaluated further in the EIR.

C. No Impact. Implementation of the BFFIP would not result in displacement of people. The BFFIP would not involve elements that would displace people, and no replacement housing would have to be built. No impact would occur and the topic of displacing substantial numbers of people, requiring construction of new housing will not be evaluated further in the EIR.

Conclusion: No additional analysis of population and housing is required.

3.5.14 Public Services

Would the project:	Potentially Significant Impact	Less than Significant Impact with Mitigation	Less than Significant Impact	No Impact
A) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered government facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:				
(i) Fire protection?	☐	☐	☐	☒

Would the project:	Potentially Significant Impact	Less than Significant Impact with Mitigation	Less than Significant Impact	No Impact
(ii) Police protection?	☐	☐	☐	☒
(iii) Schools?	☐	☐	☐	☒
(iv) Parks?	☐	☐	☐	☒
(v) Other public facilities?	☐	☐	☐	☒

A. i. No Impact. Implementation of the BFFIP would not require the provision of new or physically altered fire protection facilities. Vegetation management actions in the BFFIP would allow the use of prescribed burning and pile burning as methods for vegetation control and disposal. Prescribed burning presents a potential need for fire protection services, should the burning become uncontrolled. Prescribed burning has been used as part of the existing 1995 VMP, but those activities may intensify under the proposed BFFIP. Existing fire control resources would be sufficient and MMWD would coordinate prescribed burns with local fire protection agencies. No additional facilities would be constructed and no existing facilities would be altered to meet the needs of the BFFIP. There would be no impact to fire protection services. No impact would occur and the topic of impacts to fire protection facilities will not be evaluated further in the EIR.

A. ii, iii, v. No impact. Implementation of the BFFIP would not adversely affect service ratios for police services, schools, or other public facilities provided in the area. The BFFIP would not bring in substantially more people to the area or cause an increase in crime in the area warranting provision of additional police services, or attract more people such that new schools would be needed, or require the provision of additional MMWD facilities to serve the project. No impact would occur and the topic of impacts to police protection services, schools, and other public facilities will not be evaluated further in the EIR.

A. iv. No Impact. Vegetation removal activities, such as conducting prescribed burns and use of heavy equipment could impact recreational use by requiring the temporary closure of areas to recreational uses or by adversely affecting the natural quality of the area that attracts recreational users. These temporary impacts may lead to increased use of other recreation areas during times of BFFIP activities. Activities in the BFFIP would be local and would not result in complete closure of all MMWD lands to recreation, leaving a substantial amount of MMWD land available for recreation use. Displacement of recreational use during BFFIP activities would thus be negligible.

After activities in the BFFIP have been performed, the land would be restored to a natural setting and recreation could continue on MMWD lands. No new parks and no alterations to existing parks would be required to accommodate the negligible amount of displaced recreation. No impact would occur and the topic of impacts to parks will not be evaluated further in the EIR.

Conclusion: No additional analysis of effects to public services is required.

3.5.15 Recreation

Would the project:	Potentially Significant Impact	Less than Significant Impact with Mitigation	Less than Significant Impact	No Impact
A) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☒	☐
B) Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?	☐	☐	☐	☒
In addition to the criteria in Appendix G of the CEQA Guidelines, the following criteria is included:				
C) Result in substantially degraded recreational experiences?	☐	☒	☐	☐

A. Less than Significant Impact. Implementation of BFFIP activities would not result in a substantial increased use of existing neighborhood and regional parks or other recreational facilities as described in response A) iv) of Section 3.5.14: Public Services. Displacement of recreational use during BFFIP activities would be negligible and would not result in the substantial deterioration of facilities. The impact from substantial physical deterioration of recreational facilities would be less than significant and this topic will not be evaluated in the EIR.

Conclusion: No additional analysis of physical deterioration of recreational facilities is required.

B. No Impact. The proposed project would not include the construction or expansion of recreational facilities as a part of the BFFIP. The impact from substantial physical deterioration of recreational facilities would be less than significant and this topic will not be evaluated in the EIR.

Conclusion: No additional analysis of physical deterioration of recreational facilities is required.

C. Less than Significant with Mitigation. Construction activities, such as vegetation management could potentially occur near or on trails used by hikers and bicyclists. The presence of heavy machinery and equipment would negatively affect the recreational experience of hikers and bicyclists. A substantial impact to recreational experience could occur if prescribed burns were to occur near trails. The EIR will include an analysis of these impacts. The impacts to recreational experience could be mitigated to less than significant levels with detours and trail closures.

Conclusion: Impacts to recreational experience will be discussed in the EIR, but are anticipated to be less than significant with mitigation.

3.5.16 Transportation and Traffic

Would the project:	Potentially Significant Impact	Less than Significant Impact with Mitigation	Less than Significant Impact	No Impact
A) Conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including, but not limited to, intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	☐	☐	☒	☐
B) Conflict with an applicable congestion management program, including, but not limited to, level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	☐	☐	☒	☐
C) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☐	☒
D) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☒	☐	☐
E) Result in inadequate emergency access?	☐	☒	☐	☐
F) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	☐	☐	☐	☐

A, B. Less than Significant. Implementation of the BFFIP would result in a negligible increase in traffic in the area. Vegetation management activities already occur on MMWD lands as part of the existing vegetation management program. Implementation of the BFFIP would increase the intensity of vegetation management activities and would involve additional activities such as forest management activities, which would require additional vehicles and access within MMWD-owned and managed lands. Traffic would not increase substantially, however, because additional work crew vehicles would be limited for vegetation management activities associated with the proposed BFFIP over that needed for the current implementation of the 1995

VMP. Impacts would be less than significant and the topic of traffic impacts from conflicts with plans, ordinances, policies, and congestion management programs will not be evaluated further in the EIR.

Conclusion: No additional analysis of traffic impacts from conflicts with plans, ordinances, policies, and congestion management programs is required.

C. No Impact. Implementation of the BFFIP would not result in a change in air traffic patterns. The BFFIP would include prescribed burns, which would result in visible smoke. Prescribed Burn Plans would include measures for smoke management, and fires would not be substantial enough to cause a change in air traffic patterns. No impact would occur and the topic of air traffic impacts will not be evaluated further in the EIR.

Conclusion: No additional analysis of air traffic impacts is required.

D. Less than Significant with Mitigation. Implementation of the BFFIP would involve towing of heavy equipment on public roads. MMWD would follow all California Department of Transportation regulations related to towing such equipment, including applicable permitting or signage requirements for oversized loads. The BFFIP may result in partial or total temporary road closure if vegetation management activities take place adjacent to or close to public roads, which could cause a hazard to other drivers. Impacts will be addressed in the EIR.

Mitigation could include a requirement that appropriate detour and warning signs are placed near road closures and flagmen are used as needed. Impacts are likely to be less than significant with mitigation.

Conclusion: Traffics hazard impacts will be discussed in the EIR, but are anticipated to be less than significant with mitigation.

E. Less than Significant with Mitigation. Implementation of the BFFIP could involve activities that would block emergency access within MMWD lands (i.e., fire roads) or potentially along public roads adjacent to MMWD lands. The BFFIP may result in partial or total temporary private fire access road or public road closure if vegetation management activities take place adjacent to or close to these roads. Emergency access will be addressed in the EIR. Mitigation could require that emergency access be maintained at all times. Mitigation could require that emergency services agencies be notified ahead of time of planned road closures. Impacts are likely to be less than significant with mitigation.

Although emergency access would be affected during maintenance activities, implementation of the BFFIP would have an overall positive effect on emergency access. The BFFIP would provide for expansion and maintenance of fuelbreaks that can be used by emergency vehicles. This activity would have a positive impact on emergency access along fire roads on MMWD's lands, or potentially along adjacent public roads.

Conclusion: Impacts to emergency access will be discussed in the EIR, but are anticipated to be less than significant with mitigation.

F. No Impact. Implementation of the BFFIP is not anticipated to impact public transit, bicycle, or pedestrian facilities because activities would take place on MMWD lands where there are no public transit, bicycle, or pedestrian facilities used for transportation. Although MMWD lands do have trails that are used by hikers and bicyclists, these trails are not used for transportation. Impacts to trails would not affect pedestrian and bicyclist transportation.

Conclusion: No additional analysis of impacts to pedestrians, bicyclists, and public transit is required.

3.5.17 Tribal Cultural Resources

Would the project:	Potentially Significant Impact	Less than Significant Impact with Mitigation	Less than Significant Impact	No Impact
A) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or	☐	☒	☐	☐
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American Tribe.	☐	☒	☐	☐

A. a. b. Less than Significant with Mitigation. Tribal consultation must be initiated under Assembly Bill (AB) 52. During consultation, tribes will have the opportunity to identify potential tribal cultural resources that would require additional analysis for potential impacts. The EIR process will include consultation with local tribes and will include a description of potential tribal cultural resources, including potential impacts and mitigation that would be implemented to reduce the impact. Mitigation could include avoidance of resources and implementation of BMPs to ensure that tribal cultural resources are protected during implementation of BFFIP activities.

Conclusion: Additional analysis is required to evaluate the impact of the project on tribal cultural resources, but is anticipated to be less than significant with mitigation.

3.5.18 Utilities and Service Systems

Would the project:	Potentially Significant Impact	Less than Significant Impact with Mitigation	Less than Significant Impact	No Impact
A) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☐	☒
B) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	☒
C) Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	☒
D) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☒	☐
E) Result in a determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	☒
F) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☐	☒
G) Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☐	☒

A, B, E. No Impact. Implementation of the BFFIP would not generate wastewater. The BFFIP would not cause violation of wastewater treatment requirements of the Regional Water Quality Control Board. The project would not require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities. No impact would occur and the topic of impacts from generating wastewater will not be evaluated further in the EIR.

C. No Impact. Implementation of the BFFIP would not require the construction of new stormwater facilities that could have a significant impact on the environment. No impact would occur and the topic of impacts from construction of new stormwater facilities will not be evaluated further in the EIR.

D. Less than Significant Impact. Implementation of the BFFIP could require use of water for emergency use during prescribed burns and pile burns. Mitigation may require watering of

loosened soil to reduce dust. Water may additionally be required for restoration activities such as tree planting to address SOD and other restoration projects. Water use for restoration would be temporary at any one site, used until vegetation is established. These activities would use MMWD's water supply. MMWD's 2015 Urban Water Management Plan shows the projected "Normal Year" water supply for 2020 at 151,254 acre feet per year, while the projected demand is 40,235 acre-feet per year, resulting in an excess supply of approximately 111,019 acre-feet per year (MMWD 2016). The amount of water needed to implement the BFFIP would be minimal compared to the available supply; therefore, no new or expanded entitlements would be needed. Less than significant impacts would occur and the topic of water use will not be evaluated further in the EIR.

F, G. No Impact. Activities in the BFFIP would generate cleared vegetation, which would require disposal. Disposal of cleared vegetation would be accomplished by chipping, pile burning, hauling, or scattering. Large felled trees may be bucked by delimbing and cutting into logs, and then leaving in place, or used for construction of large woody debris structures as part of the District's Lagunitas Creek Stewardship Plan, consistent with the Memorandum of Understand for Woody Debris Management in Riparian Areas of the Lagunitas Creek Watershed. Landscape debris would not be taken to a landfill and thus would not cause a landfill to exceed capacity. MMWD would acquire all necessary permits and approvals and comply with applicable statues and regulations for burning and other potential means of disposal. No impact would occur and the topic of impacts from solid waste will not be evaluated further in the EIR.

Conclusion: No additional analysis of utilities and service systems is required.

3.5.19 Mandatory Findings of Significance

Would the project:	Potentially Significant Impact	Less than Significant Impact with Mitigation	Less than Significant Impact	No Impact
A) Have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☒	☐	☐	☐

Would the project:	Potentially Significant Impact	Less than Significant Impact with Mitigation	Less than Significant Impact	No Impact
B) Have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of past, present and probable future projects)?	☒	☐	☐	☐
C) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☒	☐	☐

A. Potentially Significant. Implementation of the BFFIP has the potential to affect habitat, wildlife, and plants. Mitigation would be designed to reduce these impacts to less than significant, as discussed in Section 3.5.4: Biological Resources; however, impacts could remain significant. Impacts and mitigation will be addressed and included in the EIR.

Implementation of the BFFIP would not eliminate important examples of major periods of California history or prehistory with the mitigation described in Section 3.5.5: Cultural Resources. Mitigation is anticipated to reduce impacts to cultural resources to less than significant levels.

B. Potentially Significant. Several impacts from the implementation of the BFFIP have the potential to be significant alone, and may combine with other projects to produce a significant cumulative effect. These cumulative impacts will be addressed in the EIR.

C. Less than Significant with Mitigation. Implementation of the BFFIP has the potential to result in hazards that could affect human beings. Section 3.5.8: Hazards and Hazardous Materials discusses the potential to impact human beings from fuel leaks and spills, hazardous air quality emissions, work near open hazardous sites, emergency access, and wildfire. Mitigation would be implemented to ensure that these hazards are reduced to a less than significant level. Implementation of the BFFIP will have an overall positive effect on human beings by reducing the potential of a catastrophic wildfire.

4 REFERENCES

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4 REFERENCES

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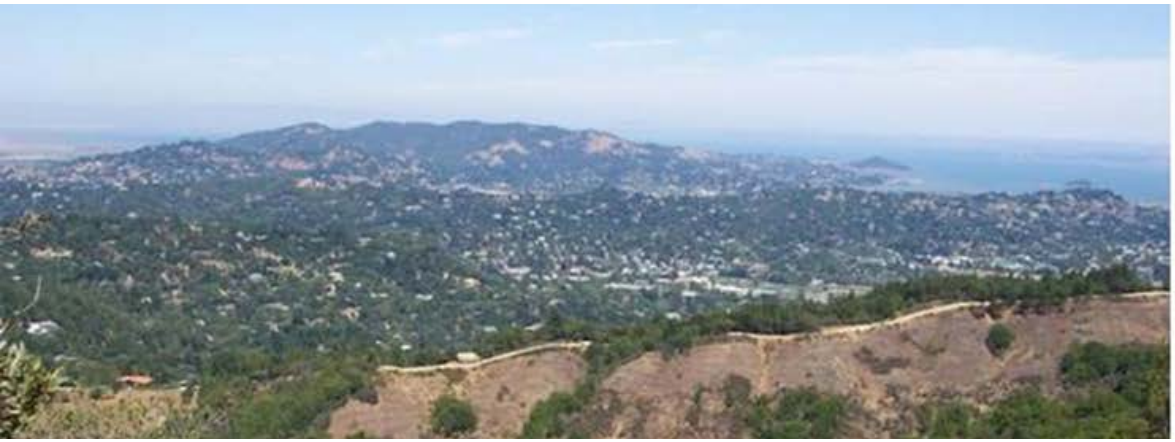
APPENDIX A

Scoping Materials

- Notice of Preparation and State Clearinghouse Receipt Letter
- Initial Study Checklist
- Public Scoping Meeting Presentation and Transcript
- Scoping Comments Received



Biodiversity, Fire, and Fuel Integrated Plan EIR Scoping Meeting

Marin Municipal Water District

January 25, 2017

MARIN MUNICIPAL WATER DISTRICT

PANORAMA ENVIRONMENTAL, INC.

Purpose of the Scoping Meeting

- Provide overview of Biodiversity, Fire, and Fuel Integrated Plan (BFFIP) history and Plan
- Summarize environmental review process
- Provide overview of environmental resources to be included in the EIR
- Solicit comments on scope of the Program Environmental Impact Report (EIR)

Overview of the BFFIP

Marin Municipal Water District

PANORAMA ENVIRONMENTAL, INC.

Development of the BFFIP

- BFFIP based largely on content of 2012 Draft WPHIP
- New plan reorganized as follows:
  - Focused goals
  - Rezoned landscape
  - **Removed herbicides**
  - Added forestry health and greenhouse gas balance actions
- MMWD staff led the development of the new plan
- Draft BFFIP available online: **www.marinwater.org/bffip**

Plan Organization

- Introduction/Framework
- Environmental Setting
- Threats, Trends, and Strategies
- Goals, Approaches, Actions

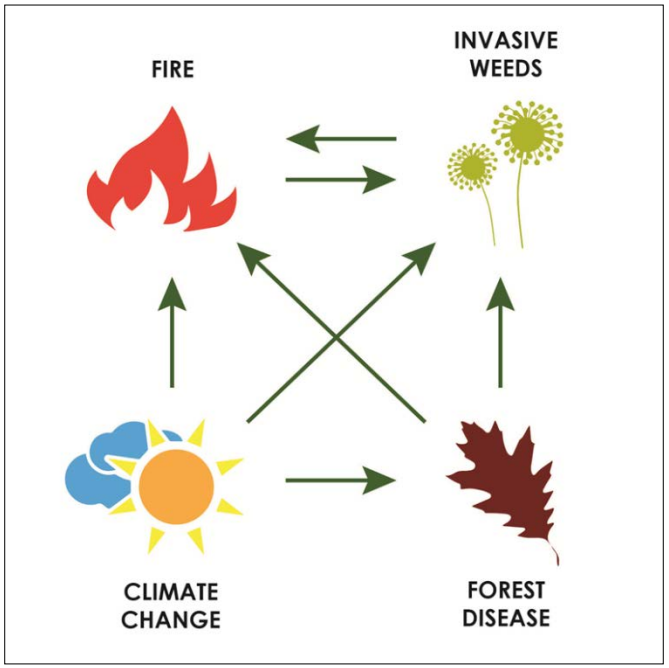
- Framework for Adaptation
- Annual Work Plan and Estimated Costs
- Anticipated Outcomes after Initial 5 Years of Implementation

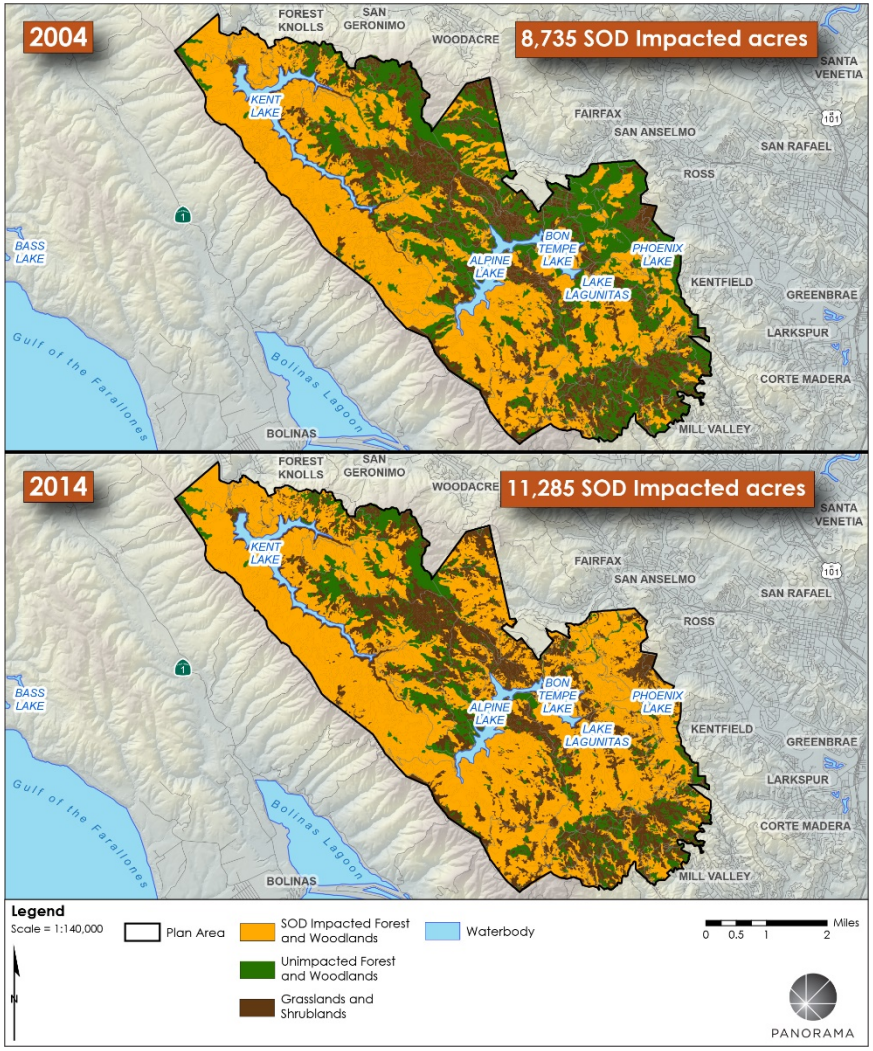
Goals of the Plan

- **Goal 1:** Minimize risk from wildfire
- **Goal 2:** Preserve and enhance existing significant biological resources
- **Goal 3:** Provide an adaptive framework for the periodic review and revision

Threats and Trends

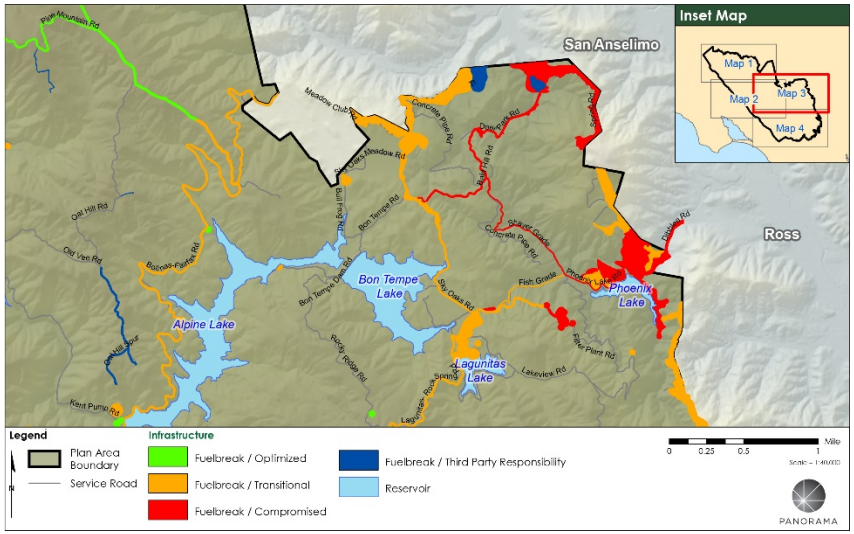
Trends related to the frequency, intensity, extent and interaction between major threats to watershed resources are described





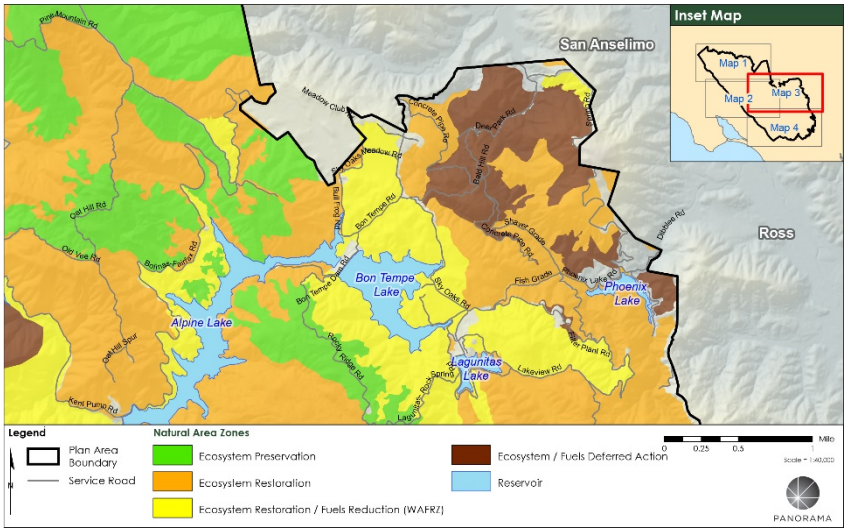
Management Strategies

Different management targets, treatments, and maintenance regimes identified for fuel breaks around built infrastructure and natural areas. Multiple benefit zones identified (in yellow).



Fuelbreaks

- Optimized: No weeds
- Transitional: Few weeds
- Compromised



Natural Areas

- Preservation Zone: Stressors minimal
- Restoration Zone: Stressors moderate
- Compromised: Stressors high

Implementation of Actions

On-the-ground actions include:

- Fuelbreak construction & maintenance
- Weed detection and control
- Forest stand improvement
- Grassland, wet meadow and oak woodland restoration
- Continued experimentation and innovation

Techniques include:

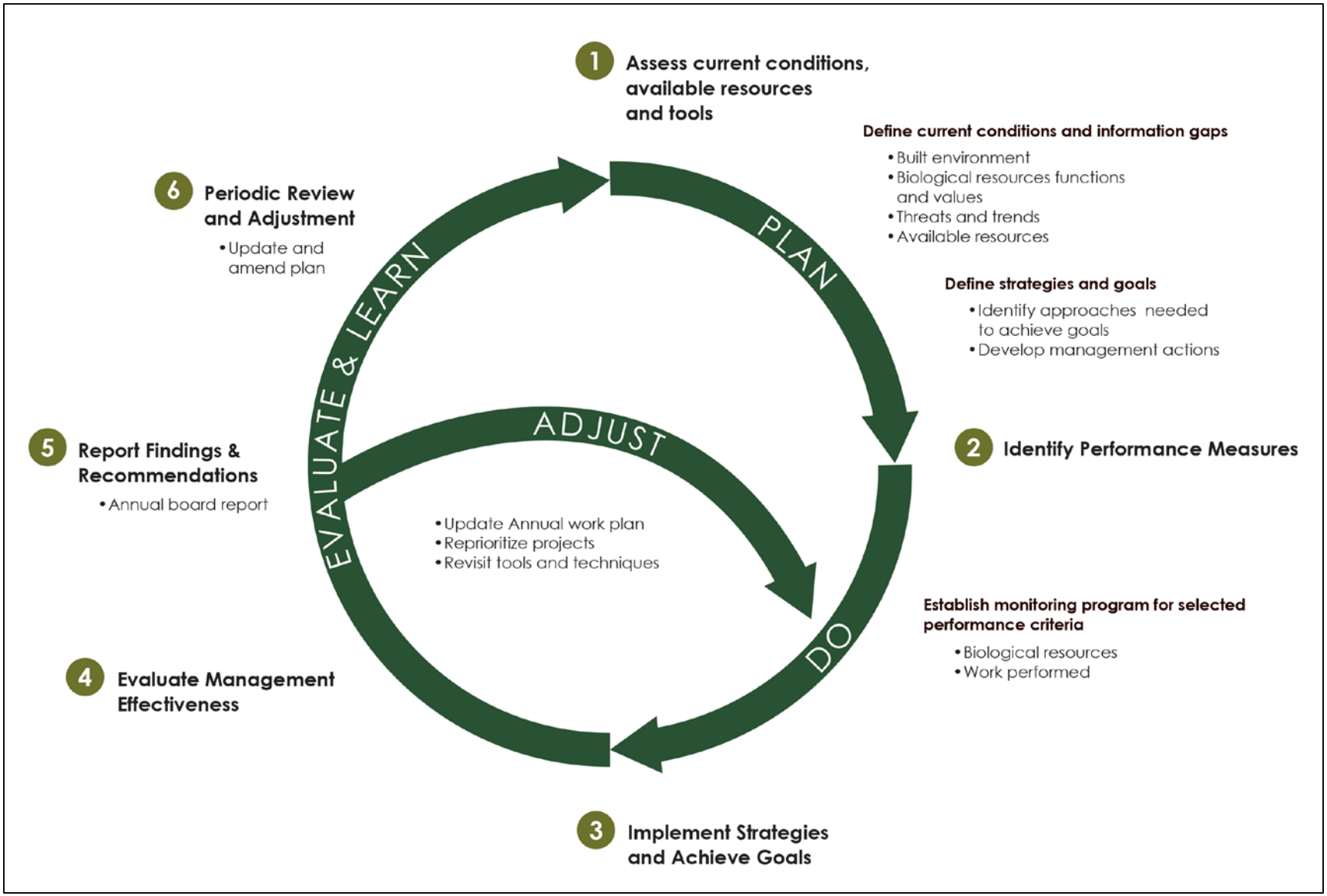
- Brushing/ mowing/mulching/ mastication
- Manual weed removal
- Other: tarping, flaming, limited scale grazing

Herbicide use is not proposed in the BFFIP

Implementation of Actions

Management Action	Methods Used	Target Treatment Quantity
MA 20 - Perform Cyclical Maintenance of Fuelbreak System	Mostly mowing, cutting vegetation manually	300 acres annually
MA 21 - Construct the Remainder of the Fuelbreak System	Mowing, cutting – thinning out understory	117 more acres – ½ completed in first 5 years
MA - 22 Expand Early Detection Rapid Response Program	Surveys and then hand methods to remove small weed infestations	Up to 100 "patches" per year.
MA - 23 Improve Forest Stand Structure	Remove dead trees from SOD, reduce fuels using mowing, brush clearing, prescribed burns	70 new acres a year, retreat up to 170 previous treated
MA – 24 Improve Grass and Oak Woodland	Thin Douglas fir, prescribed burning to minimize spread of invasives – manually remove several invasives	350 acres treated to reduce fuels and 100 acres of prescribed burning
MA – 25 Reintroduce Historic Population of Special Status Species	Collecting and planting seeds, manual removal of weeds, removing brush and small trees	7 populations a year
MA-26 Develop and Implement 10-year Restoration Plans	Individual plans needed	Approximately 155 acres total restoration
MA-27 Conduct Experiments and Trials to Control Invasive Species	Animal grazing, other new methods	3 projects a year

Framework for Adaptation:
Performance Measures, monitoring, analysis and adjustment



Environmental Review Process

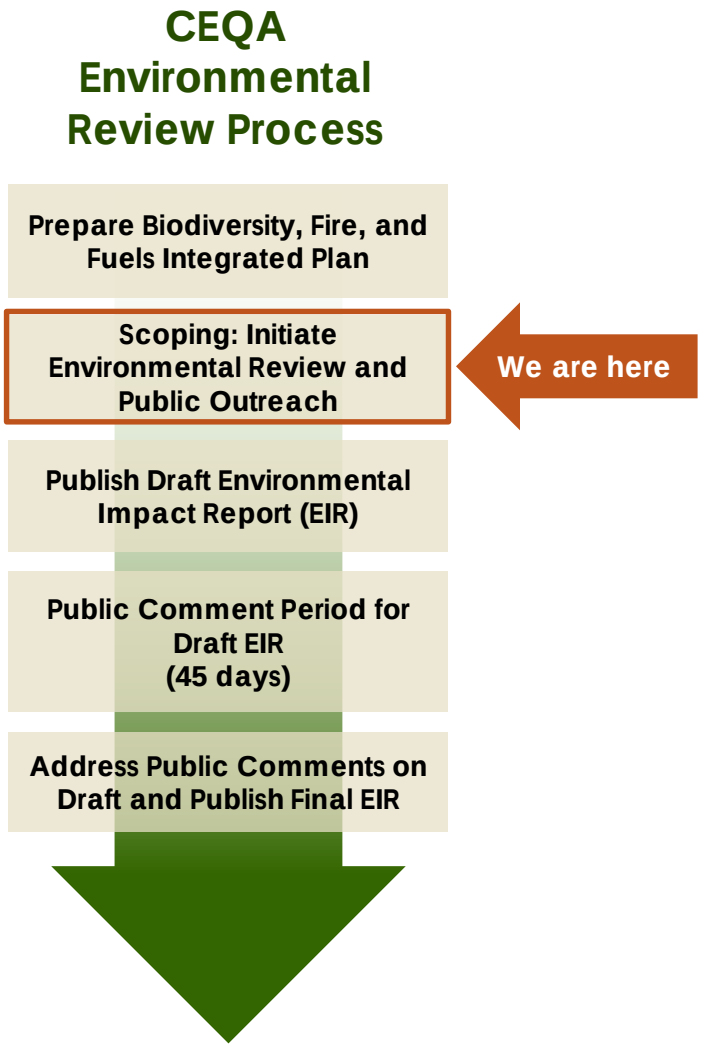
Marin Municipal Water District

Panorama Environmental, Inc.

Purpose of Environmental Review

- Inform decision-makers and the public
- Define the proposed project in detail and describe the:
  - Objectives
  - Existing setting
  - Plan approach
- Identify potential environmental effects
- Identify viable mitigation to reduce or eliminate significant effects
- Identify and consider alternatives that may reduce or avoid effects

Environmental Review Process



This scoping meeting:

- Comment on the scope of the EIR
- Not on the merits or content of the BFFIP

Alternatives:

- Must reduce and/or eliminate potential impacts
- Will be defined once the analyses have been conducted and potential impacts are identified

Resource Topics to be Addressed in EIR

Marin Municipal Water District

PANORAMA ENVIRONMENTAL, INC.

Initial Study Checklist

Initial Study Checklist

- Available on MMWD website: **www.marinwater.org/bffip**
- Focuses EIR to key topics listed below

Resources Included in EIR	Resources Covered in IS
• Aesthetics♦ • Air Quality♦ • Biological Resources♦ • Cultural Resources♦ • Geology and Soils • Greenhouse Gases♦ • Hazards and Hazardous Materials♦ • Hydrology and Water Quality • Noise • Recreation • Transportation and Traffic • Tribal Cultural Resources ♦ *indicates topics for which additional studies will be undertaken*	• Agriculture and Forestry Resources • Land Use and Planning • Mineral Resources • Population and Housing • Public Services • Utilities and Service Systems

Public Comment

Marin Municipal Water District

Panorama Environmental, Inc.

Next Steps and Opportunities for Public Comments

Activity	Purpose	Estimated Timeframe
Scoping Period♦	To collect comments from the public	30 days; January 4 – February 3, 2017
Prepare Draft EIR	Complete the analysis of environmental effects—develop and analyze alternatives	Late summer/early fall 2017
Public Review of Draft EIR♦	Public reviews the analysis and provides comments	45 day review period Late summer/early fall 2017
Response to Comments and Final EIR	Respond to public comments and make any changes to the EIR	Late 2017/early 2018
Final EIR Certification	MMWD will review the EIR findings and certify the EIR	Late 2017/early 2018
Discussion of BFFIP Merits♦	Public provides comments on the merits of the BFFIP	Late 2017/early 2018

♦ *Indicates public comment opportunity*

Edits to the Plan after Final EIR

What happens after the Final EIR is published?

- Cross-check Plan actions against Final EIR
- Minor revisions to the Plan reflecting Final EIR
- Finalize the Plan
- Opportunity to comment on the merits of the Plan
- Board of Directors votes whether to adopt the BFFIP

Plan is Posted On the MMWD Website

www.marinwater.org/bffip

How to Comment

- Comments on the scope of the EIR are due by 4:00 pm on **February 3, 2017.**
- Oral comments or comment card tonight
- Written comments
  - By mail:

    Dain Anderson
    Environmental Services Coordinator
    Marin Municipal Water District
    220 Nellen Avenue
    Corte Madera, CA 94925-1169

  - By email: bffipeir@marinwater.org
    Subject line: "BFFIP EIR Scoping Comments"

BFFIP SCOPING MEETING

AND

PUBLIC COMMENT SECTION

Reporter's Transcript of Proceedings

Wednesday, January 25, 2017

Marin Art and Garden Center

30 Sir Francis Drake Boulevard

Ross, CA 94960

Reported By:

Kelly Newton, CSR. No. 13849

JAN BROWN & ASSOCIATES

WORLDWIDE DEPOSITION & VIDEOGRAPHY SERVICES

701 Battery Street, 3rd Floor, San Francisco CA 94111

(415) 981-3498 or (800) 522-7096

MR. ANDERSON: My name is Dain Anderson. Thank you, Nicholas. On behalf of the Marin Municipal Water District, I want to thank you all for coming tonight to our Biodiversity Fire and Fuel Integrated Plan Environmental Impact Report Scoping Meeting.

Before we get started, I just want to recognize we have two of our board members here tonight, Director Larry Bragman and Director Jack Gibson, and Director Larry Russell may join us via the Internet. So far, he's not on, but we're hopeful.

Tonight's meeting is designed to allow you, the community members, the opportunity to share your comments on the scope of analysis, to be included in the Environmental Impact Report to be prepared on the Biodiversity Fire and Fuel Integrated Plan.

Before I go any further, you're going to hear three acronyms probably ad nauseam this evening. First is EIR or Environmental Impact Report, and I know everyone here is very familiar with that. CEQA or the California Environmental Quality Act, which is a state statute which requires state and local agencies to identify significant environmental effects and to avoid or mitigate those impacts, if possible, on any actions that the agencies may take. And, finally, BFFIP, Biodiversity Fire and Fuels Integrated Plan. We worked

very hard to title the document such that we could make almost a pronounceable acronym. It was a challenge.

So, our purpose tonight is to listen, it's to hear your comments on the scope of the EIR's analysis. We likely won't have answers tonight. That's really the purpose of the EIR, to hear your comments in the scope of the analysis, and then we and our consulting team start conducting the analysis. That's when those answers evolve.

So, tonight we're going to provide a plan, we're going to summarize the environmental review process, we'll present the environmental resources or parameters that, at least as we stand this evening, that will be included in the EIR, and then we'll be soliciting your comments on the scope of analysis.

So, a quick background, I know, because of the faces I see, many of you are familiar with how we got here today from actually going all the way back to 1995 when the district adopted its Vegetation Management Plan, which, very broadly, was a plan designed to provide guidance to begin managing the -- principally the mountain, our mountain watershed in terms of vegetation.

It was 2007, 2008 or so, when the district began to look at that 1995 plan and made some decisions about

the need to update the plan to reflect what had been learned in the first 10 years or so of the 1995 Vegetation Management Plan as well as to look at some increasing threats of invasive species. It was in 2012 that that effort culminated with publication of the Wildfire Protection and Habitat Improvement Plan or WPHIP.

Once that plan was published, which the evolution of that plan involved considerable numbers of community meetings and workshops, extensive vetting through the community and with our Board of Directors, we initiated preparation of an Environmental Impact Report much as we're doing this evening. As that EIR progressed, there was considerable community input expressing concern about the potential use of limited amounts of herbicides on the watershed as one of the tools -- one of many tools to control invasive species.

That continuing concern coupled with the World Health Organization's classification of glyphosate, which is one of the prime ingredients in Roundup for the commercial product, led our Board of Directors on July 15th, 2015, to direct staff to take a step back, re-examine WPHIP and to revise it to remove herbicide use from the toolbox.

Now, it was -- the rewrite of WPHIP was more

than just going through and deleting the word "herbicide." It took a considerable rewrite to organize the plan because of the way the first iteration had been drafted, and, finally, last year we were able to publish the draft Biodiversity Fire and Fuel Integrated Plan, this document, which is largely the 2012 WPHIP minus herbicides -- again, wanted to repeat that -- with the addition of some additional goals, policy, and action concerning forest health and greenhouse gas balance. It also -- we took the opportunity to update some of the background information because we had gleaned new information from ongoing research our staff is constantly doing on the mountain.

Overall, the draft is designed to guide our actions, the district's actions, to manage its lands in Mount Tamalpais and around the fringes of Nicasio and Soulajule Reservoirs where we have some land along those reservoir banks.

With that, I'd like to hand off to Tania Treis, who is one of the principals of Panorama Environmental, Incorporated, who will be working with me to prepare the Environmental Impact Report for this project.

MS. TREIS: Good evening. As Dain said, I'm Tania Treis with Panorama, and I've been involved with the process since 2012 when the draft WPHIP was under

consideration, and I've been working closely with the staff at MMWD to help prepare the plan.

So, what I'd like to do now is just give you an overview, and maybe some of you have seen or heard this presentation, but this is going to give you a high-level overview of what's included in the plan and the aspects of the plan that are important to the EIR, the parts that have physical effects on the environment, we'll briefly touch on here.

Dain did provide a link to the plan, and I just want to say up front it's smaller than the previous iterations, but there's still a lot of information, so I do encourage you to actually go to the site and look at the plan. There are lots of tables that help you understand what are the actions that are going to be taken, and the acres affected, and maps shown where.

So, the plan is divided into several chapters. It starts with an Introduction in Framework, so it explains and lays out what we're doing, why, and the history; this has, obviously, a very long history. The Environmental Setting section describes -- this is of the plan -- describes the existing conditions on the watershed, the lands that are included in the watershed, and the current species, biodiversity, and such that's on the watershed now.

The Threats, Trends, and Strategies really starts to get into why are we here, why are we preparing this plan, what is happening, what has the district noticed over the last 20 years, what is changing on the watershed, and I'll talk a little about that in a few minutes.

That leads up to the Goals, the Approaches and the Actions, which is the meat of the plan. The plan is divided into three goals, and there are several approaches to meet those goals, and then the approaches are divided into actions. Several of those actions are actually more administrative as well as surveying and monitoring actions, but then there's eight actions that are actual physical on-the-ground vegetation management part of this plan.

And then, based on those actual actions, each year an annual work plan will be prepared that will identify this is how much and where each management action will be performed on the ground. An important component of this plan is that it's a plan covering a very large area and over a long time frame. Things are going to change on the ground, so the plan includes this framework for adapting and for adjusting to the conditions as they change or learning from the tools that are used in the implementation that's happening

each year.

So, the plan includes, the first five years, an outline of the annual work plan for what exactly will be done in the first five years and the costs associated with that and the anticipated outcome after five years. So, an important aspect of the plan is having monitoring and having criteria to bench against to see if you're succeeding or not, so the plan identifying what -- those goals and what we expect as success criteria.

So, as I mentioned, these are the three basic goals, this frames the whole plan, and they are pretty straight-forward. The first is minimizing risks from wildfire. The watershed is next to an urban -- what's actually called an urban wildlife interface, and there are, I think, over 45,000 structures located within a mile of the watershed. Fire is a real hazard, and there's all the infrastructure on the watershed that must be protected. So, this is a really important goal, that vegetation is managed in order to protect the assets and the community surrounding the watershed.

The second goal is to preserve and enhance the existing significant biological resources. This is a very diverse area. There's hundreds of different species and wildlife, there are endangered species listed, plant and animal species that are known to live

in the watershed. It's 22,000 acres of wildland, so it's really important to be able to manage that to sustain and to grow that diversity.

And the third goal, as I mentioned, is, again, having a plan that's adaptive and that can address what's being learned and what is changing in the environment as time goes on.

So, Threats and Trends. The plan recognizes that certain things are happening on the watershed. Forest diseases have expanded tremendously, the map on the right shows over a 10-year time frame about 50-percent spread of 87 acres of sod-impacted areas to now, in 2014, about 11,000 acres that have been affected by sod.

Climate change is obviously occurring, and that's having impacts in terms of increasing the forest disease, forest diseases cause -- create opportunities for invasive weeds, invasive weeds come in, and that increases the fire. These are really just interacting forces, and the plan lays out that these are the important factors that we're going to look at and devise our management actions around.

This plan is a little bit different than the WPHIP in how the watershed is zoned. So, in the previous iteration, some of you may have been familiar

with, there were numbered zones. This plan tried to look at more from, again, the goals perspective, the fuels and natural areas.

So, there are two types of zoning in this plan. The first is an infrastructure zone, and that's really the fuel breaks. The fuel breaks are basically areas where the vegetation is. It's not the same as a fire break where everything is mowed and cleared out. It's an area where you thin out the vegetation. You want to get some space between the understory and the canopy in order to slow, if a fire were to occur, and it's built to protect the resources.

There's a zoning just for infrastructure, and includes fuel breaks and defensible spaces, so wherever there's assets, buildings associated with the water infrastructure, there's a certain area around that that must be maintained to keep the fuel loads down to protect from a fire.

And all of the existing fuel breaks have been categorized based upon their condition, so some of the fuel breaks have very few weeds to optimize, and there's a certain set of actions you would do for fuel breaks in that condition. There are some transitional ones that are starting to get pretty infested with weeds and need a little more intense work, so those have been called

out identifying the actions -- or identified specific to the transition, and there are some compromised ones that are so bad that it's sort of a last -- if you can get to it, that's where you go. They are so infested that it's going to be very hard to get them back. But there are some actions, again, identified for those and how to go about it.

The natural areas zoning includes -- and this is for the biodiversity and the ecosystem health goals -- it divides the watershed up into several zones that include preservation zones, restoration zones, and compromise. And, again, this is based on the condition, how bad an invasive species and forest disease, and what treatment actions are going to be determined based on the conditions and the zoning.

So, to talk a little bit more about the actions, just to give the summary of the type of actions included. Again, there's 27 management actions, but only 8 of them are related to physical effects on the watershed, that's what we're going to focus on, and those are related to fuel-break maintenance, so maintaining what's already out there. There are 600 acres or will be 600 acres that have to be maintained constantly, and there's also the construction of new fuel breaks expanding the system to what was originally

envisioned many years ago.

There is weed detection and control, so finding weed outbreaks when they happen, when they're small, getting out there and manually pulling them out, so they don't spread and become a bigger problem. Forest sand improvement, so certain activities where there's been a lot of tree death and invasives and vegetation, we have to clear that out and make the way for more natural habitats and native trees to come in.

Grassland and wetland oak and woodland restorations. So, the plan includes a planning level for several restoration projects, and those will require more detail and may require further environmental review, but the plan does lay out an action for restoration and then one action for continued experimentation and invasion, so there is an opportunity -- within this plan -- to try out new mechanical and manual methods that may come up with things like livestock grazing, tarping, various opportunities that may come up can be implemented under this plan.

What's really important, that Dain mentioned, all of these actions are carried out using a toolbox of techniques, and these are identified here. What's really important is herbicides are no longer in that toolbox, so this plan doesn't include the use of

herbicides. Everything that would be done is going to be done with brushing and mowing, mulching, mastication; that's primarily what's going to be used. Manual weed removal is important as well, and then there is some prescribed burning and other burning methods that are included, and, again, some of the experimental limited-scale grazing, tarping.

This slide -- just quickly, it's kind of dense; you can find this in the plan -- but these are the management actions that I just talked about, the ones with the physical effects, action 20 through 27, the methods used for maintaining the fuel break is mostly going to be mowing and cutting and removing vegetation manually. For constructing the fuel breaks, that's mowing, that's going to be cutting and thinning out understory, and then on the right side we have the amount of the quanties to be treated. That's a maximum. Chances are they may not get to that much, but the plan is giving the broader look and the opportunity to do as much as possible.

The early detection rapid response, that usually involves going out with surveys and then using hand weapons to remove small weed infestations, probably around an acre or less, and this can be anywhere in the watershed, improving forest stands, so removing dead

trees, reducing fuels -- (unintelligible) -- and prescribed burnings -- those are the toolbox of techniques that are used -- improving grass and woodland, there's some tree thinning for removal that's identified as prescribed burning, again, to promote the grassland's natural native vegetation restoration.

The plan includes reintroducing historic populations of special-status species as part of the restoration, so there's some goals in terms of actually finding areas where special-status species maybe can thrive and planting up to seven populations a year.

Developing the restoration plans we talked about before and conducting experiences, again, that would be animal grazing or new methods, not herbicides, but other methods that may come up or that have been used in the past and may be effective. And, again, on the right is the goals or the target.

So, this slide -- really quickly -- just shows the framework for adaptation and the process. Annually the district will prepare a report for the board that identifies what work was done, how it was accomplished, the costs associated with it, the work staff, and then what was accomplished against the goals and also some recommendations if there are modifications and methodologies going forward for the next year and what

needs to be done, that will all be identified and presented on an annual basis. And I think there's a five-year check-in as well.

But the idea here, again, is to look at -- really, critically, look at what you're doing and make sure that you're having the success you think you have and, if not, make adjustments to get there. So, that's the plan, in a nutshell.

The Environmental Review Process, so one of my tasks and the firm's tasks is to take that plan and the description and actually write an environmental review document on it, which can be a little challenging with the plan because they are not as finite as a building. We've got to make some assumptions and look at broad areas of what could be done and how it could be done in order to implement this process.

But the whole point of the environmental review is to present to the decision-makers, the district's board, as well as the public, the information they need, the science, the facts, in order to support a decision of either approving or not approving the plan before it can be implemented, and, during the process, we defined that the project is to be analyzed in the EIR, we described the existing setting for all of the environmental parameters -- which I'll show later --

that will be assessed. This is what's occurring now, what it looks like now, and that's what we're going to compare the project against, and then we do an impact assessment.

We look at, when we implement the plan, how does that change things based on the existing conditions and are those effects from the plan going to be significant or not and what mitigation is then needed in order to make those effects less significant.

So, the EIR will identify viable mitigation measures to reduce or eliminate the significant effects, and a part of the EIR process is to look at alternatives. We do not know the alternatives right now because the alternatives come out of the environmental impact analysis, and, according to CEQA, alternatives are based on alternate ways to meet most of your objectives, to reduce environmental effects.

So, we need to know where the environmental -- significant environmental effects are -- say, to biology or geology -- and then the alternatives will, basically, address in trying to reduce those environmental effects. So, we really need to go through this process and look at the analysis before we know what our alternatives will be.

This is the CEQA review process. We're at the

early stage now, we're doing the scoping. As the scoping is going on and once the scoping closes and into the next couple months, we're actually going to be digging in and doing the environmental analysis, writing up the project description, looking at each of the environmental parameters, doing technical studies and field surveys, and coming up with a technical analysis.

Once we're done with that, we put it together in the EIR, and the EIR will go out for a 45-day public review, and there will be noticing and probably a meeting during the EIR public review phase to accept comments, specifically, on the analysis. That's the 45-day EIR review period. And then, when the comments are received, we go through them, and we review them, we respond to every comment, and modify the EIR analysis accordingly, and then the final is presented -- is prepared and presented to the board.

Again, I talked about alternatives; that they must eliminate potential impacts, and we'll get into them. When you get to review the draft EIR, the alternatives will be in its own section, and that's certainly a topic that you can review and certainly comment on it now.

So, in leading up to this meeting and getting ready to prepare the EIR, we prepared what's known as an

initial study checklist. This is basically the CEQA questions and topics, and you go through it at a higher level, really focusing in on what are the areas there are going to be effects that we need to analyze in the EIR and then explaining away the impacts that maybe are pretty minimal and really don't need to take up a lot of real estate in the document.

So, that's available online, and, again, it's a good overview. It's not as detailed for -- the individual impacts are going to be in the EIR, but it gives you an idea of what topics are going to be covered and what topics don't need to be covered. And, again, that's something to comment on -- if we said something shouldn't be covered, and you think it should, that's a very good scoping or CEQA comment.

So, the resources that will be included are aesthetics, air quality, biology, cultural, geo, greenhouse gases, hazards, hydronoise, recreation, transportation and tribal cultural resources, and then the ones on the right side, those, we determined, don't have any significant effects, and so the IS explains what the effects are and determines that they're less than significant, and then they don't need to be covered further in the EIR.

The topics with little orange diamonds next to

them are the ones we're doing physical studies or surveys to gather more information and to create the scientific and robust analysis.

So, with that, I think we're ready to open it up to public comment -- actually, real quick, I've got a summary here of the opportunities to comment. Like we said, we're in the 30-day period, the initial time for you to comment on the IS and NOP and the scope of the EIR. When the draft EIR goes out, which will probably be late somewhere early fall in this year, there will be a 45-day period where the public can comment, and we'll have another meeting like this to talk about it and receive comments. And then, at the final EIR for the certification, there's usually a public comment period where folks can review the final, review the responses, and then speak before the board makes a decision on the document.

More slides. Edits to the plan and the final EIR. The plan, as you know, is listed as draft. The EIR will make -- based on the analysis, may require some changes to the plan. The actual final plan, you want to be your living document, and so once the EIR is finalized and if it's approved by the board, then we go through the plan and just make the crosschecks, make sure the plan is accurately reflecting what was

determined in the EIR, and then there will be opportunities to comment on the merits of the plan when the Board of Directors will then know whether to adopt the BFFIP when the final plan is issued.

Oral comments will be taken tonight. There's comment cards in the back, as I'm sure was mentioned when you walked in. Written comments can be sent via mail, or probably the most common way people comment is via e-mail, there's an e-mail for the project, and every comment is being collected and kept into our administrative record for the scoping period.

So, now I think we're ready to open it up for the public comment.

MR. DEWAR: As I said, when you come up, come up here, and you can use this microphone. Everybody will be able to hear you, and we'll start with Roger Roberts.

MR. ROBERTS: Roger Roberts. I'm a resident of San Rafael since 1981, and I'm a fairly regular participant in various meetings of the Water District, and I'm particularly interested in this Vegetation and Fire Management Plan.

I'd first like to make a general comment. It's my understanding that the Water District's BFFIP is derived from a containment strategy that is also limited by budgetary support that's available; that, in itself,

this strategy and this budgetary support will have its own impacts on the success or lack of success in the plan and meeting the plan goals.

I know this is a bit much to ask, and it's not necessarily required under CEQA, but it certainly would be nice if somewhere in the process there would be some summary that would address whether or not this plan is sufficient and adequate to meet its goals, and it would be nice if that matter would be addressed somewhere in the process, if not in the EIR, then in some other forum.

In particular, I would like to point out that in the BFFIP maps on pages 3-37, 3-38, 3-39, 3-40, and 3-41, these are figures in the BFFIP of -- let's see -- they are labeled -- there's figure 3-16, 3-17, 3-18, 3-19, they all show significant areas for ecosystems/fuels-deferred action. The initial study says that the EIR will not analyze the impacts of actions 20 through 27, 8 through 19, and 1 through 7. These are treatments, inventories, and planning and monitoring and reporting segments of the EIR -- or of the initial study, rather.

However, there's no proposed impact analysis associated on these designated ecosystem/fuels-deferred action areas. Lack of action or deferred action may

well have significant impacts on these areas, and, therefore, it seems to me that it deserves impact analysis in the EIR with respect to biodiversity protection and enhancement and fire management and fire management goals. Thank you.

MR. DEWAR: Thank you very much. The next speaker is Diane Hoffman.

MS. HOFFMAN: Hi, I live in Fairfax, I've lived there since 1989, and this presentation has made me so happy.

I remember years ago there were meetings at Drake High School, I think, about this, and it was tons of people talking about "Don't poison us," and I have to tell you, you hear the word "herbicide," and it sounds so benign. In fact, it's poison, and any time in life when you have to make a decision, you always should say first what's best for my health, and it's pretty clear that poisoning where you go hiking, the water, the animals, is not the answer, and this shows there are so many other ways to deal with it, and I just want to thank you very much.

MR. DEWAR: The next speaker is Roberta Anthes.

MS. ANTHES: Hi, Roberta Anthes, I'm from Fairfax, I've been there 11 years. I'm new to this, and I'm not sure if a personal story is something you'll

find relevant or not, but you can judge.

I'm here to applaud your decision to leave herbicides out of the plan as well. I'm a terribly sensitive person, somewhat severely, and what that means is that I have very strong reactions to very tiny amounts of fragrances that contain benzenes and, in particular, dichlorobenzene, and these are in perfumes lotions, detergents, fabric softeners, air fresheners, pretty much anything that has a fragrance.

What happens is that my throat constricts and I lose my voice, I get headaches, brain fog, nauseas, and I can even fall asleep right in meetings like this -- having nothing to do with whether or not it's exciting.

There's no absolute consensus about why this happens to me or to anybody else, but one thing that all of the doctors I've seen and most of the research I've read agree on is that one likely cause is exposure to toxins sometime earlier in my life, and this was certainly true for me. My family had fruit trees, and we sprayed Malathion, DDT, every season for as long as I can remember, and I played in this yard for years, and both my parents were well educated, they were research chemists, and they trusted the government that said these were okay until 1972, DDT was banned.

One of the main components of DDT is

dichlorobenzene. That's the same toxin that's currently used in common air freshens, and simpler forms of benzene are also used in multiple fragrances and perfumes and lotions, hair spray, and everything.

These are the very things that I react really severely to, and I'm glad it's not worse than that. It's a debilitating condition to a certain degree and life altering in that I have to watch where I am at all times. Even in meetings like this, I'm always in the back somewhere.

My point is that, without claiming any absolute certainly whatsoever about what caused my condition, there's a pretty high likelihood that our failure to obey the precautionary principles 60 years ago is partly what resulted in my condition. These effects can take decades to manifest, and we don't really know what the long-term outcomes will be.

I've read articles on glyphosates. Some people say they're fine, a lot of them will say they're worse than DDT, and, without more evidence to know the truth about what they really will do down the road, I really think this approach is the right way to go. It's not we who will be hurt by this; it's our children, so I'm very pleased with this, and I hope we can move forward without using those chemicals.

I realize there's a cost financially, and I recognize that. I hope there's a way to mitigate that because I think the other costs are really great, too. Thank you.

MR. DEWAR: Thank you very much. The next speaker is Paul Minault.

Let me just say, the major record is actually being taken here verbatim. Rita is tracking what you say in summary in case any of you want to see what you said or what we heard you say.

MR. MINAULT: I want to make three comments tonight, and I'm going to make other comments in my written submission, but I'll just focus on three.

The first is that I think the board should consider an herbicide alternative in the EIR, and I think there's half a dozen good reasons to do so, all of which end up with the idea that the board could change -- has a policy now, of course, and it could change its policy in the future, and there are two reasons that, of my half a dozen, that I want to mention now.

One is that portions of the watershed do not drain into the drinking water reservoir, and it makes sense to me that those would be -- those portions of the watershed would be appropriate to consider for herbicide use. So, that's something that the board might look at.

The second thing is, under the plan, there's going to be an annual review of the success of the plan, performance of the plan. And, in the course of that annual review, number one, I would suggest that that plan consider -- make some comparative study of the work that's been completed on the plan without herbicides and how that would look if herbicide use -- if herbicides had been used. I think that would be instructive and if that were done, then the board might start rethinking the policy, and there are other reasons that support that, but I won't take the time to go into them.

The second point I want to make -- I'm proud to make, as a history major, I want to tell you -- it's a focus that it is not in the present list of issues in the EIR, and it's not one that many people think of, and so it's a little bit new, maybe a little bit out there, but I want to suggest it to our EIR specialists and let them scratch their heads about it.

That is the idea that the watershed is a historic resource, we have coastal resource, it's really a historic resource. And why do I say that? It's just woods, right, most of it or it's grass. What's the big deal about that? But we now have an age where, increasingly, our environments are threatened by the impacts of globalization. Obviously the biggest one is

invasive plants, but there are others, we have pathogens and so forth, that we have seen for the -- at least the last century, ever since the loss of the chestnut tree back east. Chestnut trees are said to have been the redwoods of the East Coast, and they grew along the entire Appalachian chain, from new England all the way down to the southern states, and they're gone, boom. I can imagine how we would feel if that happened to our redwoods. We would be devastated.

Anyhow, the point is it's getting to be that some people like myself, when you walk through the woods, and you come to an area that really has not been altered by invasive plants, they just sort of take a deep breath and go, "Wow, this is really nice to be in a place that hasn't been trashed by invasive plants. It's really wonderful to see it."

What you realize is that's really a response to the historic landscape. Just as if you went to a Civil War battle, that's what we call a historic landscape, and you saw the old farmhouse there and the picket fences and maybe a few cannons, you would go, "Wow, this is really great; it's pretty much unchanged. You can really believe this is how it was."

So, I want to throw that thought out. I realize that's not the kind of thought you get normally with a

plan like this, and it might be a little out there, but I think it's time we start thinking on those terms. That's my second point.

The third one is dear to me because of my legal background, I guess. We see, when we look at the maps of the watershed, that the colors of our blue and yellow swatches on the map are mostly next to communities, and that tells us that the likely source of the broom that's on the watershed was private properties. And that's obviously not unique to the watersheds -- the water district plants, same thing in county parks, state parks, federal parks.

By and large, stuff doesn't start growing out in the middle of nowhere and move into the cities. It starts in the cities and moves out into the nowhere, right, and the plan really doesn't think about this. It's politically uncomfortable, of course, to hold people responsible for the plants that invade from their properties into public properties. No agency is really looking at this. Nobody really wants to bite that bullet. Certainly this plan does not look at that, but it is an impact, isn't it? It's a trespass -- legally it's a trespass when plants from your garden come into my yard. If you're my neighbor, that would be a trespass, and I could sue you for that if it was really

harmful for my property. Other agencies don't like to think that way, but, at least environmentally, it's an impact, isn't it?

So, I would like to -- and it's a continuing impact and to the extent this plan does not address it, this will remain a continuing impact. There's a continuing source of invasive plants in our communities that are going to come onto the open space areas.

The people who drafted the plan, who said, "Well, we have language in the plan now saying we're partnering with our neighbors." I understand you're partnering with the other public agencies and maybe with some private landowners, but we also know a lot of the partnering has to do with fire prevention, and we also know that in Marin, unfortunately, when you battle invasive plants for fire prevention purposes, that you don't necessarily knock them off for ecological purposes, and this was a huge battle on the county open spaces.

What this boils down to, I think we have a continuing impact that this plan doesn't address, and so I would propose that at least the EIR address it if the plan is not going to. Thank you.

MR. DEWAR: Thank you very much. The next speaker is Aaron Gilliam.

MR. GILLIAM: Good evening. My name is Aaron Gilliam. I'm sad to be here tonight, it's probably been 20-something years, but I grew up crawling around the pond here, catching frogs and chasing lizards; grew up in Marin County and I now live on the Marin side of the San Anselmo Valley in the north county.

And there's two things I wanted to speak to today about the BFFIP and the EIR, neither of which are currently well-represented in the BFFIP, one would be soil health and the other one is shepherding, and I hope to explain clearly and have time in the future to explain more clearly how a focus on soil health, whether we're using shepherding as a tool or not, will address a number of the problems or the concerns that are typed up in the BFFIP, including fire management, ecosystem management and the specific invasive weeds, and something that's not in this plan, but is one of the main purposes of the Marin Municipal Water District, is water resilience and water resource security.

As I mentioned, healthy soil, it's not mentioned in the BFFIP -- and I'm not sure how that's possible if there is -- I know there are biologists and hopefully ecologists on-board with the planning team, but the soil is the foundation of our ecology, it's the foundation of life for terrestrial Earth. It's different in the

ocean. You can have healthy soil, and you can have unhealthy soil, unbalanced soil, and you can have dead soil. A healthy soil is filled with an extreme diversity of life, far more diversity than there is from any soil aboveground. It has the capacity, if it's alive and filled with microbiological and macrobiological life, to break down the plant-rock, provide micronutrients to that which grows, and they interact symbiotically with the plant roots and the fungus. And, from there, sprouts all the growth that becomes, basically, the food chain.

I don't understand why, if we're focusing on ecological health, we're not talking about the soil. We don't grow grass, we don't grow plants; they grow themselves, they're programmed to do so. We don't control the rain that falls on them or the sun that comes down or the atmosphere that controls them that is around them that they're absorbing.

We do have a lot of potential to impact the soil, there's a variety of tools to do so, and hopefully looking towards healthier soils. One of the tools, which is dear to me, as I am a shepherd, is shepherding. It's different than sheep farming or cattle ranching in that, to me, shepherding -- I define -- is the complete set of management strategies employed by the eweman to

take care of both the animals they are directly responsible for and the lands that sustain them in a way that does not reduce future generation's ability to do the same. So, very broad. And to break it down to -- while taking care of your livestock, you can use them as a tool to affect the soil surface where we have the most impact on the soil, we're not mining underneath it to pump nutrients in or water extracting its soil surface, and while plants are living in green, we have the ability to interact with them in a way that they evolved especially in grassland areas.

Grasslands evolve with grazing species. They also develop from the predators of those grazing species. The majority of those are gone. We don't see the large herds of elk, large herds of deer, pronghorn antelopes, sheep. The predators are gone, too.

So, there are missing massive links in grassland ecology, but we can remimic those. As opposed to the large predators, I don't think many people are proposing putting more grizzly bears back on the land in California, but we can be the grizzly bears, as opposed to the elk and the pronghorns, although I'd love to have them here and work with them, we have cow, sheep, goats, horses.

And together we can create the same environment

at the soil surface that -- we don't grow soil, we don't grow the plants -- but we can create that environment. Dry season, wet season is the way of doing that.

I'll wrap it up. I have plenty of comments here, and I hope that in the drafting of the EIR, there's points of which we can help by providing research. I didn't see that. It seems in the public comment, you guys do your thing in public comment, but if there's points in which you guys want help in doing the research and checking the stuff, I can help with that. Thanks for your time.

MR. DEWAR: Thank you. The next speaker is Nona Dennis.

MS. DENNIS: Good evening. I'm Nona Dennis, and I'm representing the Marin Conservation League, and we'll submit written comments, but let me highlight a few observations that we're making, and they largely relate to the CEQA process, to the EIR itself, and what it contains.

We've gone through the initial study, gone through the plan, of course, gone through the initial study, and it covers the checklist, really covers pretty evidently. I think the way you treated the checklist, you've identified those areas where there are likely to be potential significant impacts.

So, as I looked through the initial study, I found no guidance with respect to alternatives. I did go back to the scope of work, contract scope of work, and found that you would develop possibly three to four alternate courses and three or four alternatives.

You've explained this evening that you can't really identify the alternatives until you have done the impact analysis. From our point of view, that really may pre-expose or predispose the alternatives. In my experience, the alternatives derived from the objectives -- and in this case the objectives are goals, and they are stated broadly enough. Some objectives, as you know, are stated so narrowly that the rate of alternatives is also limited, very narrow.

In this case, it's three objectives, which are three goals, which are to reduce fire fuels, to protect biodiversity and to adaptively manage. They are very broad. So, they allow you -- they range in alternatives in advance to think how you can feasibly achieve most of those objectives or goals, and there are several ways to do it. You would always like to lessen the impact of the project.

In our view, and this is sort of tying into what Roger said at the beginning, there is -- because of the limitations that have been imposed by policy against the

mention of herbicides in this plan, you may have actually left a lot of work that you can't do because of budgetary constraints -- (unintelligible) -- but you still cannot manage all of the advancing invasive species under the plan. And the plan or comments on the plan had been very clear. You can do so much, but you can't do all of it.

So, you're deferring action, and there are, in fact -- as Roger pointed out -- there are impacts associated with deferred action. From our point of view, we believe that the EIR, as a full-disclosure document, must actually show by comparison with and without the use of herbicides, without even committing to using herbicides. That alternative is feasible economically, it's feasible logistically, it's feasible technologically, it's feasible legally -- we'll get to that in just a moment -- but it is feasible, and there are CEQA terms to have an alternative which would include herbicides in the IPM toolbox, as usual.

And if you count in the deferred action and the impacts of deferred action, it might even lessen impacts because you can use, instead of mechanical means as a follow-up treatment, you can use a very carefully strategically-applied herbicide to minimize the further, to limit the further needs for treatment. So, there are

a lot of possible benefits.

The question becomes what is the difference between a feasible alternative under CEQA terms and when the board actually makes findings. At that point, the board can say we have a policy. Now, we understand the implications of the policy. We've never seen the policy really spelled out. We assume that the policy to not use herbicides is based on the fact you're a water supply agency, so you're taking extra precautions to protect the water supply. As Paul pointed out, you have about 3,500 acres that are not part of your water supply -- within your water supply.

Anyway, so the board has the option in making findings, when you do find significant impacts, to mitigate them. The board can make findings that this alternative, the herbicide alternative -- which may have lessened some of the impacts of ongoing treatments, you've eliminated the need for some ongoing treatments -- it may be, in fact, environmentally superior if you take into account the offset of possible exposure and health concerns and so on.

So, you can make the finding then that because of board policy, it's not feasible. The point is that the EIR must be a full-disclosure document and, to do that, it really should address this as a -- as an

option, so the public knows, so that you know when you make your decisions, you make them in a transparent fashion.

So, to make the EIR fully disclose all the impacts, we believe that you should include an alternative which does allow the use of herbicides within the toolbox. Thank you.

MR. DEWAR: The next speaker is Barbara Salzman.

MS. SALZMAN: I'm Barbara Salzman, I'm representing the Marin Audubon Society, and we're still in the process of evaluating and coming up with our comments, but I do have a small list here of things that we think that you should be addressing, which is the purpose of the comment tonight and scoping period.

Number one is biodiversity. The name of the document starts out with biodiversity, but it really doesn't address biodiversity; all it addresses is plants. There's a lot more to biodiversity and to ensuring a healthy ecosystem and ensuring biodiversity than just plants -- not that they're not important, sorry to the plant folks here -- but they are part of the ecosystem, they are not the entire ecosystem.

Number two, there's a lot in the name of the document to do with fire, and I think we all know there are some conflicts between the way the lands have to be

managed to deal with fire and the way it might be best for them to be handled and managed to protect the ecosystem and to protect water quality and wildlife and biodiversity. So, I think there needs to be some addressing of those conflicts and maybe some recommendations on how they should be addressed in a more ecological manner.

Thirdly, IPM -- there are several references to IPM, maybe more than several in the plan -- and to the district's revising, looking at their IPM program and maybe changing it, there's a reference to -- in one of the policies, to addressing -- changing the tools, revising the tools. There's a conflict between that and the fact that the district really doesn't have an IPM program. If you take out a major component of the program, you really don't have a program anymore, so this needs to be addressed. What is meant by those references, those policies, and how one is going to go be able to go about changing the tools, adding tools. Is there a process that's going to come about that's going to exist for that?

We'd like to show our support for what Nona said about the need for an alternative that addresses -- we would call it an IPM alternative -- that addresses the full range of tools that other districts use, other land

managers use, and that the district should be using, too. This is necessary for full disclosure and in the public interest. You might not like it, might not choose it, but, nevertheless, it needs to be addressed in the Environmental Impact Report.

And, lastly, I'd like to ask for a comparison between the past success before the herbicides were banned, the current success in eliminating broom and other invasive non-natives, and the anticipated success under the plan's proposed actions. Thanks. We'll be submitting a letter with more issues.

MR. DEWAR: The next speaker is Priscilla Bul.

MS. BUL: I'll try not to repeat the excellent statements made by other people here, but I am asking for some clarification of what looks like a contradiction on the terms of policy.

I have a copy here of Mount Tamalpais' Watershed Management Policy, No. 7, was adopted in 2010, and it says, "Exotic species, the district will give a high priority to the control of exotic species," and then more definition of that. The overall approach will be, in keeping with the principles of integrated pest management, IPM, a variety of methods including mechanical removal, chemical application, the introduction of biological control agents and prescribed

burns. So, that is board policy.

Now, as we have heard, the board decided that they did not want to include chemicals on the watershed, and I don't know -- I'd like an explanation in the EIR or somewhere of what looks like two policies that contradict one another, and I don't recall that the regular watershed management policy was amended a year or a year and a half ago when the herbicides were knocked out, so that's one thing.

Continuing on, it's laudable that the plan calls for continuing evaluation of what's the evolving science of various ways of treating nonnative species, all new methods except for herbicides, and this plan doesn't just eliminate the use of glyphosate -- which is obviously the elephant in the room here -- but all herbicides, and I think there are some herbicides that are evolving that are pretty benign, and why are we eliminating everything from this study, because there may be safe alternatives.

And I think a couple people before me mentioned that we need at least some ideas so the public can know what the cost will be of trying to keep our internationally-recognized ecosystem on Mount Tamalpais healthy without using any kind of chemical applications.

I have some more details that aren't that

important, but I'll put those in a letter. It talked about exponential increase in funding and staff, and that's what, I think, we should have -- the public needs to know what you're talking about there.

And then, finally, along that line, is the most depressing part I found in reading this was at the top of page -- of the summary, ES 4, it says, "Ecosystem," "The target is ecosystem and fuels-deferred action areas," and it admits right here the district's wildfire goals nor biological goals are likely to be achieved. That's really frustrating. Thank you.

MR. DEWAR: Thank you. The next speaker, Mallory Geitheim.

MS. GEITHEIM: For me, this is pretty simple. If you poison soil, you poison the water, you poison the air, and you ultimately poison the citizens here. If there's a problem with an individual person who is having invasive species come into their own property, then cultivate your garden. Do it, clean it yourself, and keep on top of it. I just think that having poisons in our entire ecosystem is ridiculous and unhealthy and dangerous, and the long-term problem that we're going to have is more cancer and more lung problems, and it's just -- it's not necessary. Thanks.

MR. DEWAR: That takes care of all the speaker

cards I have. Was there anybody who thought they had a speaker card and was skipped? We've completed all of the comments. Thank you very much indeed, and let's hand it back to Dain.

MR. ANDERSON: Again, on behalf of the district, thank you for coming out today. We've received some excellent comments, I look forward for those of you who said you'll be submitting letters or e-mails to getting some additional detail. I think it's going to help us frame a complete EIR that satisfies both the core requirements of the California Environmental Quality Act as well as provides an adequate disclosure document, the ups and downs of implementing the Biodiversity Fire and Fuels Integrated Plan as drafted.

We look forward to that and thank you so much.

(Meeting concluded at 8:16 p.m.)

STATE OF CALIFORNIA)

) ss.

COUNTY OF ALAMEDA)

I, the undersigned, duly qualified Certified Shorthand Reporter of the State of California, do hereby certify:

That the witness in the foregoing deposition named, was present at the time and place therein specified;

That the said proceeding was taken before me as a Certified Shorthand Reporter at the said time and place, and was taken down in shorthand writing by me;

That I am a Certified Shorthand Reporter of the State of California, that the said proceeding was thereafter transcribed by means of computer-aided transcription, and that the foregoing transcript constitutes a full, true and correct report of the proceedings which then took place;

That I am a disinterested person to the said action.

IN WITNESS WHEREOF, I have hereunto subscribed my hand this 6th day of February, 2017.

Kelly Newton, CSR No. 13849

APPENDIX A

Scoping Materials

- Notice of Preparation and State Clearinghouse Receipt Letter
- Initial Study Checklist
- Public Scoping Meeting Presentation and Transcript
- Scoping Comments Received

Dain Anderson

From: Larry Rose <larryrosemd@sbcglobal.net>
Sent: Thursday, January 05, 2017 8:06 PM
To: Biodiversity, Fire and Fuels Integrated Plan EIR
Subject: Comments on section 6 "Implementation of Vegetation Management Actions"

The top priority should be the replanting and the spread of Douglas Fir, and coast redwood forests, and none of these healthy trees should ever be cut down. This policy would have a important effect on the overall amount of water precipitation on the MMWD 22,000 acres. The patterns of costal fog during the dry season would be most efficiently captured and dripped to the underlying soil by these two native species. Mature Oaks also somewhat capture fog and drip water.

Most of the grass species found in the water shed were imported from Europe and protecting these grass lands is not appropriate.

In the past "controlled burning" has caused intense smoke pollution in southern Marin and therefore is a public health hazard and should be discontinued since the prevailing westerly winds during the dry months blow smoke right into the populated southern Marin communities. When previous burns polluted the air in Mill Valley the BAAQD would not respond and the controlled burn air pollution continued unabated.

Please acknowledge the receipt of this comment. Thanks for you attention.

According to your notice you have eliminated the consideration of the use of toxic herbicides, eg glyphosate formulations, on the MMWD water shed---thank you for making that decision that is harmonious with what is well established toxicology science. Thanks again.

Dain Anderson

From: Bill Rothman <w1rothman@gmail.com>
Sent: Friday, January 06, 2017 8:56 AM
To: Biodiversity, Fire and Fuels Integrated Plan EIR
Subject: BFFIP scoping input

From William Rothman

To BFFIP Draft EIR (Please acknowledge receipt of this scoping input)

Subject:

Input to BFFIP, for section 6:

The information provided in the CDFA email, which is at the end of this email, shows, that there are several organisms, many of which have been found in California, and all of which are known to eat broom which may well already be eating broom in the watershed or may be expected to control the broom in the near future. Their potential role should be considered in section 6 of the BFFIP). Because the broom eating species listed are already in California, there should be an entomologist brought in to evaluate whether which, if any, of the species named may already be eating broom in the MMWD watershed. Then, if they are already present, measures could be instituted to promote their numbers, and if they are not yet present, consideration could be given to introducing them into the watershed. The consultant entomologist would also be able to consider information newer than that referred to in the CDFA communication shown below.

List of Organisms shown in CDFA communication:

psyllid, A. hakani

The seed pod weevil, Exapion fuscirostre

The stem-boring moth, Leucoptera spartifoliella

The psyllid, Arytainilla spartiophila

Asphondylia pilosa

The gall mite, Aceria genistae

The psyllid, Arytaina genistae

The seed beetle, Bruchidius villosus

From: "Pitcairn, Mike@CDFA" <mike.pitcairn@cdfa.ca.gov>

Date: September 30, 2014 10:49:19 AM PDT

To: "Smith, Link" <Link.Smith@ARS.USDA.GOV>, Larry Rose <larryrosemd@sbcglobal.net>

Cc: "Moran, Patrick" <Patrick.Moran@ARS.USDA.GOV>, Brian Hogg <hoggbrian@yahoo.com>

Subject: RE: French and Scotch Broom infestations with the psylid, Arytinnis Hakani, and the gallmite Aceria Genistae.

Larry,
Lincoln is the lead scientist working with natural enemies of French broom. He has made very good progress with the **psyllid, A. hakani**, but as he mentioned, there are some issues with non-target use on some native lupine species that needs to be investigated further. Lincoln gave a good summary and I will be repeating much of what he wrote but will try to add a bit more background to the information. Historically in California, most of the biological control work on brooms has been directed at Scotch broom. Two insects were released in the 1960s: **the seed pod weevil, Exapion fuscirostre, and the stem-boring moth, Leucoptera spartifoliella. Both are well established in the Scotch broom infesting the Sierra Nevada foothills. However, neither has provided the control we would like.** Several insects have shown up in California accidentally. **The psyllid, Arytainilla spartiophila, is very common and occurs in high abundance in the Sierra Nevada foothills. More recently, a small midge that galls the flower buds, Asphondylia pilosa, was discovered this Spring in two locations in Siskiyou County in northern California. Also, the gall mite, Aceria genistae, was discovered for the first time last year in a location just south of Georgetown in El Dorado County. I also found it this year in two locations in Siskiyou County, so it's starting to spread into California. Another psyllid, Arytaina genistae, was found on Scotch broom in the coastal counties of northern California but it's not overly common. Lastly, a seed beetle, Bruchidius villosus, occurs in Oregon and will likely move south into California but I haven't recovered it yet. Unfortunately, none of these insects appears to infest French broom, even though the literature suggests they might.** I was hoping, in particular, that the beetle, B. villosus, would attack French broom, but reports from Oregon say they've found it only on Scotch broom so far. We don't know what kind of impact the flower gall midge or the gall mite will have on Scotch broom as they are very new to California.

I hope this helps,

Tania Treis

From: Dain Anderson
Sent: Friday, January 06, 2017 2:22 PM
To: Tania Treis; Josh Phillips (josh@pacificbiology.com); Jake Schweitzer
Subject: FW: Draft Biodiversity plan, rare vegetation

Hi all,

I'm blindly passing this along for the moment. I'll talk w/ Janet re: what this means, is there a pending refinement to the BFFIP appendix, etc.

Dain

From: Andrea Williams
Sent: Friday, January 06, 2017 12:01 PM
To: 'Doreen L. Smith'
Cc: Janet Klein; Dain Anderson
Subject: RE: Draft Biodiversity plan, rare vegetation

Thanks, Doreen. I have passed your notes along, and appreciate the info.
Happy New Year!
Best,
Andrea

From: Doreen L. Smith [mailto:dlsflora321@gmail.com]
Sent: Friday, January 06, 2017 11:45 AM
To: Andrea Williams
Subject: Draft Biodiversity plan, rare vegetation

Hi Andrea,

Jim Shevock's 21st Jan hike about Alpine Lake might turn up some rare mosses. I'm useless there, can't recognize any of them.

A few supplemental notes for you about the Mt. Tam. area rare plants listed in the Biodiversity Document Rare Plant Appendix .

Amsinckia lunaris, was present 2014,
Cascade Canyon, Fairfax, by entrance to Elliot Nature Preserve, the property of MCOSD

Arabis blepharophylla,
Small patch was by Kent Trail on serpentine, also there's a patch S. of the Buckeye Circle access , Gary Giacomini Preserve, near Woodacre if that is significant.

Astragalus breweri, the Mt Tam. populations have lilac flowers. Other populations in other Counties have white-cream flowers, Jepson Manual makes no special comment about this.

Calandrinia breweri explodes in numbers after fires on sandstone “chamise” chaparral, e.g. after the fairly-recent Pine Mountain/ Poison Spring event.

Ceanothus rigidus, an error of id for hybrid of C. cuneatus and C. jepsonii, found at serpentine/sandstone chaparral interfaces. Calflora.org still has too much reliance on old un-annotated records for supposed Marin Co. rare plant occurrences. At least “Mono Lake milk vetch” is no longer one of Marin’s rare spp .

Erysimum franciscanum
Coastal bluffs near the Steep Ravine trail, west end by road for access to cabins. There are white, cream and yellow-flowered plants.

Fritillaria lanceolata var. tristulis (has typo)

Lessingia hololeuca, not seen by me closer to Mt. Tam. than Terra Linda, and China Camp, it's not always on serpentine, but usually.

Quercus parvula var. tamalpaisensis, probably a leaf-shape variety of Q wislizeni

Stebbinsoseris decipiens, once seen along Highway 1, on serpentine, S. of the wooded end of the steep ravine trai.l

Happy New Year, though the chaparral is doubtless still roiling with hungry ticks,

Doreen

155 Buena Vista Ave.
Mill Valley, CA 94941
December 5, 2017

Dain Anderson
Environmental Services Coordinator
Marin Municipal Water District
220 Nellen Avenue
Corte Madera, CA 94925

Re: MMWD's Biodiversity, Fire and Fuels Integrated Plan (BFFIP), Draft EIR

Dear Mr. Anderson:

I would like to submit brief comments as to the scope of environmental analyses to be included in Marin Municipal Water District's (MMWD) Biodiversity, Fire and Fuels Integrated Plan (BFFIP) EIR under the California Environmental Quality Act (CEQA).

First I would like to commend MMWD for abandoning in 2012 the use of herbicides as part of the contents of its "tool box" in combating noxious and invasive weeds such as scotch broom.

As an MMWD ratepayer and environmentalist I would like to stress that non-use of herbicides on MMWD lands should be contractually required of all lease and easement holders (See, MA-9 of "Cost and Preliminary Work Plan", Chapter 7). Additionally, all local fire departments should be advised that "no herbicide usage" is MMWD policy with which they must abide (See MA-10, Ch. 7). This "no herbicide usage" policy should also be conveyed to adjacent land owners (private, county, state and federal) with which MMWD shares common borders (See MA-10, Ch. 7).

The management action of restoring 105 acres of meadows and native grassland contained in MA-26 (ES – Executive Summary) is an excellent goal of the EIR, as is MA-25's (ES – Executive Summary) goal of re-introducing historic populations of special status species. However, the specific species are not identified and I would like to see the scope of the EIR expanded to consider the evaluation of native bunchgrasses, such as the handsome and adaptable California fescue (See "Gardening With a Wild Heart", by Judith Larner Lowry (1999) pp 106-109), as a special status species in appropriate areas. Native bunchgrasses serve many purposes, including erosion control, fire suppression, water retention and carbon sequestration.

The carbon sequestration of native grasses and bunchgrasses is being actively studied by the Marin Carbon Project (www.,marincarbonproject.org) and would be a profitable area of investigation when the EIR attempts to evaluate the greenhouse gas and

climate change effects of the BFFIP project (See MA-19 of ES: "Monitor effects of forest management actions on greenhouse gas balance and water yields.").

The scope of the BFFIP EIR should also be expanded to specifically include goat grazing as an option for a mechanical means of invasive species eradication and fuel load management. See www.livingsystemslandmanagement.com.

With regard to MA-11 (Ch. 7), "Maintain operational readiness to respond to fire events", I would hope the BFFIP EIR analysis extends to whether the use of chemical fire-fighting sprays would be allowed on the MMWD watershed.

I extend my thanks to MMWD staff and management for the thoroughness and comprehensiveness of the BFFIP EIR to date. And thank you in advance for consideration of my submitted comments.

Sincerely,

Kerry Stoebner

kerry.stoebner@gmail.com

155 Buena Vista Ave.
Mill Valley, CA 94941
December 6, 2017

Dain Anderson
Environmental Services Coordinator
Marin Municipal Water District
220 Nellen Avenue
Corte Madera, CA 94925

Re: MMWD's Biodiversity, Fire and Fuels Integrated Plan (BFFIP), Draft EIR

Dear Mr. Anderson:

This is a brief addition to the comments I submitted on December 5, regarding the scope of environmental analyses to be included in Marin Municipal Water District's (MMWD) Biodiversity, Fire and Fuels Integrated Plan (BFFIP) EIR under the California Environmental Quality Act (CEQA).

I would like to inform staff of the "Scotch Broom Smackdown" program employed by the Oregon State University Extension Services, (See: http://extension.oregonstate.edu/question-of-the-week/scotch-broom-smackdown), in the hopes that it can be evaluated as a method for eradicating / controlling scotch broom on the MMWD watershed, consistent with BFFIP's primary goal of minimizing risk from wildfire as well as with Management Actions 8 – 10 to facilitate vegetation management. Oregon State Extension Service's recommendation is to pull scotch broom with a weed wrench if the basal stem diameter is less that 1/2", but cut the stem of plants with a stump diameter of 1/2" or larger. According to Oregon State University, "It is more effective to cut larger plants because the larger cut ones die when cut and pulling them will disturb the soil, stimulate more seed germination and result in more scotch broom plants."

Thank you in advance for consideration of these submitted comments.

Sincerely,

Kerry Stoebner

kerry.stoebner@gmail.com

Dain Anderson

From: Larry Rose <larryrosemd@sbcglobal.net>
Sent: Saturday, January 07, 2017 2:38 PM
To: Bill Rothman
Cc: Biodiversity, Fire and Fuels Integrated Plan EIR
Subject: Re: BFFIP scoping input

Excellent input. This promising method of possibly effictive controlling broom should be thoroughly researched by MMWD as a top priority.
On Jan 6, 2017, at 8:56 AM, Bill Rothman wrote:

From William Rothman

To BFFIP Draft EIR (Please acknowledge receipt of this scoping input)

Subject:

Input to BFFIP, for section 6:

The information provided in the CDFA email, which is at the end of this email, shows, that there are several organisms, many of which have been found in California, and all of which are known to eat broom which may well already be eating broom in the watershed or may be expected to control the broom in the near future. Their potential role should be considered in section 6 of the BFFIP). Because the broom eating species listed are already in California, there should be an entomologist brought in to evaluate whether which, if any, of the species named may already be eating broom in the MMWD watershed. Then, if they are already present, measures could be instituted to promote their numbers, and if they are not yet present, consideration could be given to introducing them into the watershed. The consultant entomologist would also be able to consider information newer than that referred to in the CDFA communication shown below.

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Asphondylia pilosa

The gall mite, Aceria genistae

The psyllid, Arytaina genistae

The seed beetle, Bruchidius villosus

From: "Pitcairn, Mike@CDFA" <mike.pitcairn@cdfa.ca.gov>

Date: September 30, 2014 10:49:19 AM PDT

To: "Smith, Link" <Link.Smith@ARS.USDA.GOV>, Larry Rose <larryrosemd@sbcglobal.net>

Cc: "Moran, Patrick" <Patrick.Moran@ARS.USDA.GOV>, Brian Hogg <hoggbrian@yahoo.com>

Subject: RE: French and Scotch Broom infestations with the psylid, Arytinnis Hakani, and the gallmite Aceria Genistae.

Larry,
Lincoln is the lead scientist working with natural enemies of French broom. He has made very good progress with the **psyllid, A. hakani**, but as he mentioned, there are some issues with non-target use on some native lupine species that needs to be investigated further. Lincoln gave a good summary and I will be repeating much of what he wrote but will try to add a bit more background to the information. Historically in California, most of the biological control work on brooms has been directed at Scotch broom. Two insects were released in the 1960s: **the seed pod weevil, Exapion fuscirostre, and the stem-boring moth, Leucoptera spartifoliella. Both are well established in the Scotch broom infesting the Sierra Nevada foothills. However, neither has provided the control we would like.** Several insects have shown up in California accidentally. **The psyllid, Arytainilla spartiophila, is very common and occurs in high abundance in the Sierra Nevada foothills. More recently, a small midge that galls the flower buds, Asphondylia pilosa, was discovered this Spring in two locations in Siskiyou County in northern California. Also, the gall mite, Aceria genistae, was discovered for the first time last year in a location just south of Georgetown in El Dorado County. I also found it this year in two locations in Siskiyou County, so it's starting to spread into California. Another psyllid, Arytaina genistae, was found on Scotch broom in the coastal counties of northern California but it's not overly common. Lastly, a seed beetle, Bruchidius villosus, occurs in Oregon and will likely move south into California but I haven't recovered it yet. Unfortunately, none of these insects appears to infest French broom, even though the literature suggests they might.** I was hoping, in particular, that the beetle, B. villosus, would attack French broom, but reports from Oregon say they've found it only on Scotch broom so far. We don't know what kind of impact the flower gall midge or the gall mite will have on Scotch broom as they are very new to California.

I hope this helps,

Dain Anderson

From: jon oldfather <jon.oldfather@gmail.com>
Sent: Friday, January 13, 2017 11:08 AM
To: Biodiversity, Fire and Fuels Integrated Plan EIR
Subject: glycophosphate

Please find alternatives to this suspected carcinogen while managing MMWD watershed.

Jonathan Oldfather
158 Pine st
san anselmo, ca 94960

Roger D. Harris
10 Echo Avenue
Corte Madera, CA 94925

January 19, 2017

Dain Anderson
Environmental Services Coordinator
Marin Municipal Water District
220 Nellen Avenue
Corte Madera, California 94925

Subject: EIR Scoping Comment for MMWD's draft BFFIP

Dear Mr. Anderson:

Thank you for the opportunity to submit scoping comments on the Marin Municipal Water District's (District) Draft Biodiversity, Fire, and Fuels Integrated Plan (Plan) in response to the Notice of Preparation (NOP) for the Environmental Impact Report (EIR).

My Background

I have been a Marin County resident for over 30 years. During that time I have worked as a restoration biologist in the region. I have master's degree in Wildlands Resource Science, am a Certified Wildlife Biologist, and have developed resource management plans for properties like the ones managed by the District.

Scoping Request to Include an IPM Alternative

I request that the Plan include an alternative that uses Integrated Pest Management (IPM) as a management tool. And by IPM, I mean a vegetation management approach which includes the limited use of herbicides where appropriate. Without the inclusion of the option to use herbicides, claiming to be using an IPM approach is less than complete.

The objective of *controlling* invasive weeds such as broom and *Dittrichia* has been abandoned for the lesser standard of merely *slowing the rate of spread* on most of the Marin Municipal Water District's lands under the proposed Draft Biodiversity, Fire, and Fuels Integrated Plan.

District's Complete Herbicide Ban

As a matter of policy – something that can be changed by the District's elected board – the District has switched from a scientifically-based IPM approach to vegetation management, which includes the limited use of herbicides where appropriate, to a total ban on all herbicides. This ill-conceived ban foregoes the effective synergy of using limited herbicide application in combination with other management tools.

According to the District's own documentation, the result of the ban has been a failure to reverse the spread of weeds, increasing fire hazard, and skyrocketing costs to rate payers (projected $400,000 annual increases for next 5 years for a total cost of $11M).

One of the consequences of the total ban on herbicides, which has stressed staff resources and budget, has been the so-called deferred action zones. Any pretense of managing for biodiversity has been dropped in the deferred action zones. While I understand that these areas are heavily infested with noxious weeds, the District still has a responsibility as a land steward to manage for biodiversity on these lands as well.

CEQA Feasibility

The California Environmental Quality Act requires an EIR to consider a "reasonable range" of "feasible" alternatives.

The omission of a full IPM alternative – including the limited use of herbicides where appropriate – in the current draft Plan fails to pass the "reasonable range" test, because the very problems that the Plan is supposed to address are in part the consequence of taking a full IPM approach off of the table.

Further, the objective of controlling (as opposed to merely slowing) the spread of noxious weeds is not being met currently and will not be met by implementation of the Plan – according to the District's own documentation – because of the policy of not using any herbicides under any circumstances.

CEQA defines "feasible" as "capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors." Accordingly, the proposed Plan is not "feasible" because the objective of control will not be met.

I understand that the District's board has rejected a full IPM approach as a matter of policy. But if that policy is a hindrance to achieving the stated goals (Table 2.4-1 in the NOP), it is the policy that is not feasible. Including a full IPM approach passes the test of feasibility.

Full IPM Alternative

As a matter of fiat, the draft Plan fails to even evaluate scientific data (including health risks) or consider a cost-benefit-analysis of using a full IPM approach. The Plan is now in the scoping phase, which is an opportunity to put it back on a scientifically sound and cost effective track by including a full IPM alternative in the upcoming environmental review process.

Again, thank you for your consideration.

Sincerely,

Roger D. Harris

Dain Anderson

From: Warren <warren@commoncurrent.com>
Sent: Tuesday, January 24, 2017 5:23 PM
To: Dain Anderson
Cc: 'Larry Bragman'
Subject: Comments on Watershed Plan for CEQA

Hi Dan,

Here are my comments on watershed plan—please let me know if you have any questions:

Goal 1: incorporate climate change **mitigation** into ecosystem management goals.

Approach: Devise land use and forestry management carbon sequestration plan for climate change mitigation

Action: Increase use of highest carbon-sequestering land uses. Example: prioritize preservation, maintenance and replanting (where appropriate) of old-growth redwood forests (which can store 3x carbon more than other types of forests, according to recent studies), and other redwood forests (2x carbon storage). Fact: 2 mature redwood trees each remove and store 1600 tons of carbon, which is equal to the average American lifetime carbon output. Redwoods also perform a critical role in local watershed water quality, soil health and water supply, which is complementary to other MMWD objectives.

Action: Determine carbon sequestration efficacy as additional planning prioritization factor for other ecosystems besides redwood ecosystems: Douglas fir and oak forests, grasslands, wetlands/ vernal pools, other hardwood forests. This would include studying and implementing soil management best practices (keep soil covered, prevent soil erosion, consider adding amendments such as compost).

Action: Develop forestry and land maintenance practices, including soil management, that increase carbon sequestration—apply compost to grasslands, prioritize largest tree species individuals for preservation, preserve fallen trees for carbon storage that pose minimal fire hazard (redwoods).

Goal 2: make climate change **adaptation** part of ecosystem management goals.

Approach: Devise land use, forestry management and facilities/ infrastructure management plan for climate change adaptation.

Action: plan green infrastructure for water retention and water/soil quality improvement in terms of newly constructed infrastructure. Perform cost-benefit analysis on green infrastructure best management features and practices vs. grey infrastructure practices.

Action: Plan green infrastructure retrofitting for water retention and water/soil quality improvement in terms of existing facilities and infrastructure (which constitutes 7% of MMWD land holdings). As well as private land holdings (especially around Nicasio Reservoir) that directly impact MMWD water supply. Inventory opportunities for improvement in existing infrastructure. Perform cost-benefit analysis on green infrastructure best management features and practices vs. grey infrastructure practices.

Action: utilize forestry and land use practices recommended for drought, intense precipitation, and flooding as part of climate change adaptation plan: this would include soil best management practices. Design swales and holding areas to infiltrate additional water during forecast periods of more intense run-off, especially when run-off can endanger water body water quality or can run-off downslope from MMWD water retention areas. Research and implement management strategies to help redwood forests and other critical habitat adapt to climate change (Sempervirens Fund study): minimize soil disturbance, protect and buffer.

Best,

Warren

Warren Karlenzig
President
Common Current
10 Floribel Ave.
San Anselmo, CA 94960
(415) 518-7575
warren@commoncurrent.com
Twitter: @Greenflow

Pesticide Free Zone, Inc.
P.O. Box 824, Kentfield, CA 94914-0824
888/590-3993 or 415/459-1391 *phone* 415/456-2849 *fax*
www.pesticidefreezone.org

January 17, 2017

Dain Anderson
Environmental Services Coordinator
Marin Municipal Water District
220 Nellen Ave.
Corte Madera, CA 94925

Dear Mr. Anderson,

Thank you for the opportunity to assist in identifying the range of actions, alternatives, mitigation measures and potential significant environmental effects to be analyzed in the EIR you will be preparing.

Our organization applauds the wise decision of your agency to avoid use of pesticides in all forms on the watershed. We understand the unique situation this places your agency in with respect to the normative actions of similar agencies of today but definitely leading in best practices of the future.

Please consider the following:

1. Consider measuring soil health and mineral content supportive of bio mass. This aspect is often overlooked when only above ground growth is considered, especially in areas where what is considered ideal or native biomass is absent or no longer being supported.
2. In areas where fire brakes are established and soils disturbed, if freed from the "nativist ideology" what alternative ground covers are available?
3. In light of changing climate patterns, no matter what the cause, evaluate new "native" plant possibilities taking into account soil needs and availability.
4. Look into creating grazing zones were hard to reach terrain is maintained by agile animal populations, and what that might do to the overall watershed health.
5. Each plant root structure differs in the amount of soil disruption if pulled, and for this reason at some point can be too damaging to extract rather than just cutting. This is true with broom and probably so with other species. Please https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5123327/table/Tab2/expand

on each species - how and when it is best to eliminate each from an area where not desired.

6. When evaluating plants considered "weeds" please indicate what biological value is rendered to the soils and environment, as well as what in the area supported its growth.

Our organization feels MMWD is a leader in looking at environmental health through elimination of toxic chemicals that pollute air, water, soils and our bodies. Managing the watershed should not be just about eliminating what are considered "weeds", but should be about building healthy soils that will be supportive of all that resides above.

Sincerely,

Ginger Souders-Mason

Ginger Souders-Mason, Director

Dain Anderson

From: Diane Hoffman <hoffman_diane@yahoo.com>
Sent: Thursday, January 26, 2017 4:51 PM
To: Biodiversity, Fire and Fuels Integrated Plan EIR
Subject: Letter to support the New Plan

Dear Sir,
I fully support the new plan for the Mount Tam watershed which uses no toxins or herbicides. Some say it will cost us more money, if so let it be. What is the cost to society financially and emotionally to pay for ill health? You must err on the side of caution. You cannot ignore the fact that the World Health Organization, International Agency for Research on Cancer, classified glyphosate as a probable carcinogen.
I applaud the MMWD for this new plan....you are doing the right thing.
Sincerely,
Diane Hoffman

Diane Hoffman
REAL ESTATE, WITH INTEGRITY
AND ATTENTION TO DETAIL
Bradley Real Estate
44 Bolinas Road
Fairfax, CA 94930
Bus: 415-482-3139
License # 01271342
hoffman_diane@yahoo.com
www.MarinHomeReview.com

Dain Anderson

From: Mary Beth Brangan <mbbrangan@gmail.com>
Sent: Thursday, January 26, 2017 6:39 PM
To: Biodiversity, Fire and Fuels Integrated Plan EIR
Subject: Comments on the BFFIP

I'm writing to express strong support for the new plan for the MMWD to control unwanted growth without the use of dangerous herbicides. Citizens have voted many times to advocate against the use of harmful herbicides. As we all know, glyphosate has been classified by IARC as a 'probable carcinogen.' There's far too much in our environment already, as well as in human tissues.

Thanks for listening and acting upon the concerns of well-informed residents. The MMWD can show the way to a sustainable management system for our precious Marin watershed.

Sincerely,

Mary Beth Brangan

Dain Anderson

From: Robert Darcy <robert.darcy@icloud.com>
Sent: Thursday, January 26, 2017 7:43 PM
To: Biodiversity, Fire and Fuels Integrated Plan EIR
Subject: BFFIP

I wholeheartedly support the MMWD's BFFIP. The water district is a treasure and I am grateful for the work MMWD has done to protect it.
Robert Darcy
Fairfax

auto corrected by my iPhone

Dain Anderson

From: Sangita Moskow <lisamoskow@rocketmail.com>
Sent: Thursday, January 26, 2017 11:59 PM
To: Biodiversity, Fire and Fuels Integrated Plan EIR
Subject: Thank you for no pesticide plan!

Thank you for keeping pesticides out of our water.

Blessings, sangita Moskow

Sangita Moskow

For sound samples:
http://www.lisasangitamoskow.com

State of California – The Natural Resources Agency
DEPARTMENT OF FISH AND WILDLIFE
Bay Delta Region
7329 Silverado Trail
Napa, CA 94558
(707) 944-5500
www.wildlife.ca.gov

EDMUND G. BROWN JR., *Governor*
CHARLTON H. BONHAM, *Director*

January 26, 2016

Mr. Dain Anderson
Marin Municipal Water District
220 Nellen Avenue
Marin, CA 94925

Dear Mr. Anderson:

Subject: Draft Biodiversity, Fire, and Fuels Integrated Plan, Notice of Preparation of a Draft Environmental Impact Report, SCH #2017012007, Marin County

The California Department of Fish and Wildlife (CDFW) reviewed the Notice of Preparation (NOP) of a draft Environmental Impact Report (EIR) provided for the Draft Biodiversity, Fire, and Fuels Integrated Plan (Project) located within Marin County. The NOP was received in our office on January 9, 2017.

CDFW is a Trustee Agency with responsibility under the California Environmental Quality Act (CEQA) §15386 for commenting on projects that could impact fish, plant and wildlife resources. CDFW is also considered a Responsible Agency if a project would require discretionary approval, such as the California Endangered Species Act (CESA) Permit, the Native Plant Protection Act, the Lake and Streambed Alteration Agreement (LSAA) and other provisions of the Fish and Game Code that afford protection to the State's fish and wildlife trust resources. Pursuant to our jurisdiction, CDFW has the following concerns, comments, and recommendations regarding the Project.

PROJECT DESCRIPTION AND LOCATION

The Project proposes to adopt and implement the Biodiversity, Fire and Fuels Integrated Plan (BFFIP) within the land managed by the Marin Municipal Water District (District), including within Mount Tamalpais and the Nicasio and Soulajule reservoirs, to reduce fire hazards and to maintain and enhance ecosystem functions over 21,000 acres. The proposed vegetation management actions include fuel breaks, mowing, dam maintenance, weed control treatments, prescribed burns, Douglas-fir thinning, and planting.

The CEQA Guidelines (§§15124 & 15378) require that the draft EIR incorporate a full project description, including reasonably foreseeable future phases of the project, and that contains sufficient information to evaluate and review the project's environmental impact. Please include a complete description of the following project components in the project description:

- Footprints of permanent Project features and temporarily impacted areas, such as staging areas and access routes
- Encroachments into riparian habitats, wetlands or other sensitive areas
- A full description of all vegetation management actions, including but not limited to developing fuel breaks, thinning of vegetation such as Douglas-firs and any oak woodlands, the proposed 10-year restoration plans, and when and where these actions will take place.

ENVIRONMENTAL SETTING

Sufficient information regarding the environmental setting is necessary to understand the Project's, and its alternative's (if applicable), significant impacts on the environment (CEQA Guidelines, §§15125 & 15360). The Biological Resources Section 3.5.4 states that approximately 50 special-status plant species and 45 special-status wildlife species could potentially occur on District land. CDFW recommends that the CEQA document prepared for the Project provide baseline habitat assessments for special-status plant, fish and wildlife species located and potentially located within the Project area and surrounding lands, including all rare, threatened, or endangered species (CEQA Guidelines, §15380).

CDFW recommends that prior to Project implementation, surveys be conducted for special-status species with potential to occur, following recommended survey protocols if available. Survey and monitoring protocols and guidelines are available at: https://www.wildlife.ca.gov/Conservation/Survey-Protocols.

Habitat descriptions and species profiles should include information from multiple sources: aerial imagery, historical and recent survey data, field reconnaissance, scientific literature and reports, and findings from "positive occurrence" databases such as California Natural Diversity Database (CNDDB). The CNDDB contains only records of species and natural communities which have been observed and documented. Absence of data in such sources does not confirm that the species is absent from the proposed Project area. Based on the data and information from the habitat assessment, the CEQA document can then adequately assess which special-status species are likely to occur in the Project vicinity.

Botanical surveys for special-status plant species, including those listed by the California Native Plant Society (http://www.cnps.org/cnps/rareplants/inventory/), must be conducted during the blooming period for all sensitive plant species potentially occurring within the Project area and require the identification of reference populations. Please refer to CDFW protocols for surveying and evaluating impacts to rare plants available at: https://www.wildlife.ca.gov/Conservation/Plants.

IMPACT ANALYSIS AND MITIGATION MEASURES

The CEQA Guidelines (§15126.2) necessitate that the draft EIR discuss all direct and indirect impacts (temporary and permanent) that may occur with implementation of the Project. This includes evaluating and describing impacts such as:

- Potential for "take" of special-status species;
- Loss or modification of breeding, nesting, dispersal and foraging habitat, including vegetation removal, alteration of soils and hydrology, and removal of habitat structural features (e.g. snags, roosts, overhanging banks);
- Permanent and temporary habitat disturbances associated with ground disturbance, noise, lighting, reflection, air pollution, traffic or human presence;
- Potential impacts from fuel breaks, prescribed burns, and mechanical and manual thinning, and any other maintenance activities, and
- Potential for loss of waterways and or wetland habitat.

The CEQA document also should identify reasonably foreseeable future projects in the Project vicinity, disclose any cumulative impacts associated with these projects, determine the significance of each cumulative impact, and assess the significance of the Project's contribution to the impact (CEQA Guidelines, §15355). Although a project's impacts may be insignificant individually, its contributions to a cumulative impact may be considerable; a contribution to a significant cumulative impact – e.g., reduction of available habitat for a listed species – should be considered cumulatively considerable without mitigation to minimize or avoid the impact.

Based on the comprehensive analysis of the direct, indirect, and cumulative impacts of the Project, the CEQA Guidelines (§§ 15021, 15063, 15071, 15126.2, 15126.4 & 15370) direct the lead agency to consider and describe all feasible mitigation measures to avoid potentially significant impacts in the draft EIR, and/or mitigate significant impacts of the Project on the environment. This includes a discussion of take avoidance and minimization measures for special-status species, which are recommended to be developed in early consultation with the U.S. Fish and Wildlife Service (USFWS), the National Marine Fisheries Service and CDFW. These measures can then be incorporated as enforceable project conditions to reduce potential impacts to biological resources to less-than-significant levels.

Fully protected species may not be taken or possessed at any time (Fish and Game Code § 3511). Therefore, the draft EIR is advised to include measures to ensure complete take avoidance of these fully protected species.

Based on the Biological Resource Section 3.5.4, northern spotted owls (NSO), a listed species under CESA, could potentially nest and or roost in the trees as well as use habitats or forage within the project site or adjacent areas. Substantial modification of stands used for nesting by NSO (as indicated by surveys or documented activity centers) would be a significant impact. Please specify if and what size, number, species, and location of trees that will be removed, and provide mitigation for the loss of nesting and foraging habitat. Describe proposed standards for retention of large snags, trees with cavities, and other features that could provide nesting opportunities for NSO. Please indicate how such features will be identified, marked and protected.

The Project may also have short-term adverse impacts from Project activities to NSO, such as disturbance from elevated sound levels or human presence near nest sites. Disturbance may reach the level of take when at least one of the following conditions is met: Project-generated sound exceeds ambient nesting conditions by 20 to 25 decibels (dB); Project-generated sound, when added to existing ambient conditions, exceeds 90dB; human activities occur within a visual line-of-site distance of 40 meters or less from a nest. If NSO are within the Project vicinity, the draft EIR should address noise and visual disturbance on NSO from Project activities and provide measures to avoid or minimize disturbance to active nest sites near the Project footprint. USFWS has provided technical guidance for analyzing when sound and visual disturbance reaches a level that may result in take in their document, *Estimating the Effects of Auditory and Visual Disturbance to Northern Spotted Owls and Marbled Murrelets in Northwestern California*, dated July 26, 2006. Avoidance and minimization measures should include: seasonal no-work buffers around the activity center as described in USFWS's *Northern Spotted Owl Take Avoidance Analysis and Guidance* (2011) or alternative measures approved by USFWS and CDFW.

CDFW recommends protocol level surveys for NSO following the USFWS's *Protocol for Surveying Proposed Management Activities that May Impact Northern Spotted Owls* (USFWS, 2011, with 2012 revisions). Section 9.0, "Surveys for Disturbance-Only Projects," recommends at least six surveys from March 15 through August 31 (the NSO breeding season), at least seven days apart, and over an approximately 0.25-mile area around the Project perimeter.

The draft EIR should analyze potential impacts to Townsend's big-eared bat, a species of special concern, as a result of Project activities. Townsend's big-eared bats range throughout much of western North America, including most of California. They are active at night and roost in colonies or individually in caves, mines, large old trees, large undisturbed spaces in buildings and other structures with large quiet spaces. Disturbance and loss of large colony roosts sites during the maternity and hibernation seasons are considered primary factors that may negatively impact the species in California, although disease, climate change, pesticide use and other factors may also negatively affect populations.

The Project may also provide suitable habitat for pallid bat, a species of special concern. The pallid bat occurs throughout a variety of habitats including all types of woodland, grassland, and riparian areas if appropriate roosting sites are available. This species may seek shelter inside crevices and cavities found in natural features such as trees, cliffs, caves and rocky outcrops, as well as, man-made features. Examples of threats to the pallid bat include mortality and/or loss of roosting habitat due to disturbance, exclusion, extermination, and pesticide use.

CDFW recommends that a Qualified Biologist, approved by CDFW, conduct a habitat assessment during the appropriate time for potentially suitable bat habitat within six months of Project activities. If the habitat assessment reveals suitable bat habitat, then the Qualified Biologist should submit an avoidance and protection plan to CDFW for review. The avoidance and protection plan should: 1) evaluate the suitable habitat present within the Project footprint, 2) develop work windows for tree trimming and/or tree removal (typically August 31 through October 15, when young would be self-sufficiently volant and prior to hibernation, and March 1 to April 15 to avoid hibernating bats and prior to formation of maternity colonies), 3) identify appropriate buffers outside of this work window, and 4) outline timing of tree trimming and removal. The draft EIR should include measures to compensate for the loss of suitable bat habitat.

Table 2.4.2 states action within grassland and oak woodland habitat may occur. Mature oak woodland is one of the most biologically diverse and productive habitat types in California; however, oak trees typically have very slow growth rates. The biological functionality of oak woodlands may be impacted by thinning or clearing due to loss of wildlife roosting and nesting trees, encroachment by conifers, loss of acorn mast trees, and other factors. The draft EIR should clearly describe impacts to oak woodlands and, if necessary, develop a restoration plan that will adequately account for the slow growth rate and the quality and quantity of habitat provided by these trees.

Riparian vegetation provides many important ecosystem functions; it supports habitat and cover for numerous species of wildlife, moderates temperature extremes, reduces soil erosion and sustains water quality. To address all impacts, all riparian vegetation removal, including non-native species and trees greater than four inches in diameter should be replaced. To allow for a greater density and more rapid re-establishment, CDFW recommends replacement of at least a 3:1 per area impacted with phased planting and an appropriate planting palette.

REGULATORY REQUIREMENTS

California Endangered Species Act
Please be advised that a CESA permit must be obtained if the project has the potential to result in "take" of plants or animals listed under CESA, either during construction or over the life of the project. Issuance of a CESA Permit is subject to CEQA documentation; the CEQA document must specify impacts, mitigation measures, and a mitigation monitoring and reporting program. If the Project will impact CESA listed species, early consultation is encouraged, as significant modification to the Project and mitigation measures may be required in order to obtain a CESA Permit.

CEQA requires a Mandatory Finding of Significance if a project is likely to substantially impact threatened or endangered species (CEQA §§ 21001(c), 21083, & CEQA Guidelines §§ 15380, 15064, 15065). Impacts must be avoided or mitigated to less-than-significant levels unless the CEQA Lead Agency makes and supports Findings of Overriding Consideration (FOC). The CEQA Lead Agency's FOC does not eliminate the Project proponent's obligation to comply with Fish and Game Code § 2080.

Lake and Streambed Alteration Agreement
CDFW will require an LSAA, pursuant to Fish and Game Code §§ 1600 et. seq. for Project-related activities within any 1600-jurisdictional waters within the proposed Project area. Notification is required for any activity that will substantially divert or obstruct the natural flow; change or use material from the bed, channel, or bank including associated riparian or wetland resources; or deposit or dispose of material where it may pass into a river, lake or stream. Work within ephemeral streams, washes, watercourses with a subsurface flow, and floodplains are subject to notification requirements. CDFW, as a Responsible Agency under CEQA, will consider the CEQA document for the Project. CDFW may not execute the final LSAA until it has complied with CEQA (Public Resources Code § 21000 et seq.) as the responsible agency.

FILING FEES

CDFW anticipates that the Project will have an impact on fish and/or wildlife, and assessment of filing fees is necessary (Fish and Game Code, § 711.4; Pub. Resources Code, § 21089). Fees are payable upon filing of the Notice of Determination by the Lead Agency and serve to help defray the cost of environmental review by CDFW.

If you have any questions, please contact Ms. Karen Weiss, Senior Environmental Scientist (Supervisory), at (707) 944-5525 or Karen.Weiss@wildlife.ca.gov; or Mr. Craig Weightman, Environmental Program Manager, at (707) 944-5577.

Sincerely,

Scott Wilson
Regional Manager
Bay Delta Region

cc: State Clearinghouse #2017012007

Dain Anderson

From: Teresa Bright <tabathome@yahoo.com>
Sent: Thursday, January 26, 2017 4:52 PM
To: Biodiversity, Fire and Fuels Integrated Plan EIR
Subject: glyphosate

Dear Water District,

I am writing to urge you to ban the use of glyphosate in Marin. We have too many toxic substances in our environment without knowingly adding another. Please find other ways to remove invasive plants that pose dangers of other types.

Thank you very much,

Teresa Bright
67 Porteous Avenue
Fairfax, Ca 94930

tabathome@yahoo.com
H: 415-457-8914
C: 415-259-7530

Dain Anderson

From: Alice E B <marinreiki@gmail.com>
Sent: Friday, January 27, 2017 9:31 AM
To: Biodiversity, Fire and Fuels Integrated Plan EIR
Subject: Toxic is

Dear Marin Water District
Please NO toxins to control vegetation (even as a back up, back up plan!) Toxic to plants is toxic to water, and all life. Including US!
Thank you for your thoughtful consideration to find other organic ways to control plants.
My best
Alice Baker

Alice E Baker
Holistic health
www.ajna-om.com
www.aliceherbals.com
415-250-4704

Dain Anderson

From: Jes Richardson <jes@bridgeofhearts.org>
Sent: Friday, January 27, 2017 10:31 AM
To: Biodiversity, Fire and Fuels Integrated Plan EIR
Subject: Our Watershed

Dear Dain,
Please keep toxic pesticides out of the watershed!
Thanks!
Jes Richardson

Dain Anderson

From: Martha Ture <marthature@sbcglobal.net>

Sent: Friday, January 27, 2017 11:55 AM
To: Biodiversity, Fire and Fuels Integrated Plan EIR
Cc: Lawrence Bragman
Subject: Comments, Marin Municipal Water District Biodiversity, Fire and Fuels Integrated Plan ("BFFIP")
Attachments: Pine Point1.JPG; Egret 2.JPG; Otters 3.JPG

Comments, Marin Municipal Water District Biodiversity, Fire and Fuels Integrated Plan ("BFFIP")

TO: Dain Anderson, Environmental Services Coordinator, MMWD

FROM: Martha Ture

RE: BFFIP

DATE: January 27, 2017

Dear Dain Anderson,

Thank you for this opportunity to comment on the BFFIP. My concerns have to do with the potential use of herbicides, including glyphosate, in MMWD lands for control of invasive broom species. I recommend that MMWD adopt a policy banning the use of glyphosate and other herbicides on watershed lands for broom control or other foliage control.

My bona fides are as follows. I a retired from the California Public Utilities Commission where I served as a regulatory analyst. Prior to this, I was a policy analyst in the Office of Policy Analysis, US Environmental Protection Agency, Washington, D.C., and fisheries biologist, National Marine Fisheries Service. In that capacity I am co-author, 3 published papers on the effects of crude oil on aquatic food chains. I am currently an independent wildlife photographer on MMWD watershed lands. I have been taking photographs of water, birds, fish, and mammals on MMWD lands since 2013. I have an extensive collection of archival photographs and can identify individual deer families, otter families, coyotes, hawks, herons, and egrets on the lands. I live in Cascade Canyon, Fairfax, and am on MMWD lands every day. I am also an occasional volunteer with OneTam, identifying animals and birds from wildcam photos, and signing up to pull broom next to the lakes.

I have done a literature review of glyphosate, and found that it has the following characteristics:

1. It is highly water soluble, according to findings of the California Department of Pesticide Regulation. http://www.cdpr.ca.gov/docs/emon/pubs/fatememo/glyphos.pdf

The relevant summary reads:
Glyphosate is highly soluble in water (11,600 ppm at 25 OC Kollman andSegawa, 1995) with a octanol-water coefficient (logKow) of -3.3. Experiments conducted for US EPA's reregistration

eligibility decision (RED) indicate that glyphosate is stable in water at pH 3, 5, 6, and 9 at 35 OC. It is also stable to photodegradation in pH 5, 7 and 9 buffered solution under natural sunlight. The hydrolysis half-life is >35 days (Kollman and Segawa, 1995). Bronstad and Friestad (1985) also found that glyphosate shows little propensity toward hydrolytic decomposition. Studies conducted in Manatoba Canada (Kirkwood, 1979) suggest that glyphosate's loss from water is through sediment adsorption and microbial degradation. Ghassemi et al. (1981) concluded that the rate of degradation in water is generallyslower because there are fewer microorganisms in water than in most soils. Studiesconducted in a forest ecosystem (Feng et al., 1990; Goldsbourough et al., 1993;Newton et al., 1994) found that glyphosate dissipated rapidly from surface water ponds high in suspended sediment, with first order half-lives ranging from 1.5-11.2 days. In streams, residue was undetectable in 3-14 days. In U.S. Environmental Protection Agency (EPA) tests using water from natural sources, the half-life ranged from 35 to 63 days (U.S. EPA, 1986). For all aquatic systems, sediment appears to be the major sink for glyphosate residue.

This research has not be contradicted by any more recent papers I was able to review.

2. The same California Department of Pesticide Regulation literature review summarizes the contradictory environmental fate data of glyphosate in a forest environment. One of the studies cited states "Santillo et al., 1989. A three year study on songbird abundance in forests was conducted in Maine. Following glyphosate treatment of clearcuts in Maine forests, the total number of birds and the abundance of three common species of birds decreased in comparison to untreated control areas. .."

3. More recent work (Persistence in foliage and soils. Journal of Agriculture, Food and Chemistry 38: 1118-1125.xxii Kremer RJ & Means NE. 2009. Glyphosate and glyphosate-resistant crop interactions with rhizosphere microorganisms. European Journal of Agronomy31: 153-161, for example) recapitulates impacts and attendant uncertainties.

The pathways of glyphosate into the environment are well documented. The application onto the plant leaves affects the plant, its roots, the soil microorganisms, soil organisms such as earthworms and chitinous insects. The application onto plants also deposits particles in the air and surrounding plants and soil, and water. Finally, glyphosate is persistent in soils and its presence is notably reduced after rain, when it washes down into water courses.

Because MMWD's mandate is primarily provision of safe drinking water to its customers, and because glyphosate is readily removed from drinking water by chlorination, glyphosate probably does not present serious public health concerns in MMWD drinking water. However, MMWD's mandate includes the increasingly important protection of its watershed lands, not only as flora and fauna preserve and recreation area, but now as a recognized carbon sink and source of oxygen, ecological complexity, and resilience. Because glyphosate is widely shown to have damaging impacts on soil and aquatic food chains, it is in MMWD's best interests to avoid its use entirely.

For these reasons, I recommend that MMWD adopt a policy of banning the use of glyphosate and other herbicides on watershed lands for broom control or other foliage control.

I have included some photos of some of the individuals who are most at risk from glyphosate exposure, and the waters that are next to broom areas, that are at risk from glyphosate exposure.

Thank you for your time and consideration.

Sincerely,

Martha E. Ture
186 Canyon Road
Fairfax

Dain Anderson

From: Martha Ture <marthature@sbcglobal.net>
Sent: Friday, January 27, 2017 6:54 PM
To: Biodiversity, Fire and Fuels Integrated Plan EIR
Cc: Lawrence Bragman
Subject: Addendum, Martha Ture's comments on BFFIP

Dear Dain Anderson,

This email constitutes an addendum to my comments on the BFFIP.
An additional study has come to my attention. It is a 2012 study by Relyea - New effects of Roundup on amphibians: Predators reduce herbicide mortality; herbicides induce antipredator morphology
http://www.biology.pitt.edu/sites/default/files/facilities-images/Relyea_pubs/2012%20Relyea.pdf

The author shows that glyphosate induces changes in the morphology of three species of tadpoles.

The author also notes, page 635:
"For most plants, glyphosate alone has difficulty penetrating plant tissues due to the presence of the leaf cuticle layer, so a surfactant is typically added to introduce glyphosate into the plant. Polyethoxylated tallow amine (POEA) is one of the most commonly used surfactants. **This surfactant can be highly toxic to fish and amphibians at application rates that are found in nature (Relyea 2006).** While the surfactant of Roundup Original MAX is a trade secret (S. Mortenson, personal communication), the formulation has a toxicity to amphibians that is nearly identical to those formulations that are known to contain POEA (Relyea 2005d, Relyea and Jones 2009).
The concentrations of glyphosate-based herbicides in wetlands depend on whether the applications are inadvertent (e.g., applications over forests; Thompson et al. 2004) or due to drift, soil run-off, and plant wash-off. Expected worst-case concentrations, based on a range of assumptions regarding application rates, water depth, and interception by vegetation, range from 1.4 to 7.6 mg a.e./L (where a.e. stands for acid equivalents; Boutin et al. 1995, Mann and Bidwell 1999, Giesy et al. 2000, Solomon and Thompson 2003). Observed worst-case concentrations range from 1.7 to 5.2 mg a.e./L (Edwards et al. 1980, Giesy et al. 2000, Thompson et al. 2004). The half-life of glyphosate in pond water ranges from 8 to 120 d depending on environmental conditions (Barolo 1993).

Now let us consider the impacts of glyphosate on the protected salmonids that inhabit MMWD waters just below Peters Dam and in the Lagunitas watershed more broadly.

If MMWD is informed and aware of the finding in this paper, and applies glyphosate in a way that can contact these species, this constitutes a taking under federal law - Endangered Species Act Section 9 - prohibition re endangered species.

Under the Endangered Species Act, "take" means "to harass, harm, pursue, hunt, shoot, wound, kill trap, capture or collect" any listed species or to attempt any such activity.

Central Coast coho are listed as an Endangered species. http://www.fisheries.noaa.gov/pr/species/Species%20in%20the%20Spotlight/central_california_coast_coho_salmon_spotlight_species_5-year_action_plan_final_draft__1_.pdf

And MMWD is specifically named in the Central Coast Recovery Plan, p. 43 http://www.westcoast.fisheries.noaa.gov/publications/recovery_planning/salmon_steelhead/domains/north_central_california_coast/central_california_coast_coho/ccc_coho_salmon_esu_recovery_plan_vol_i_sept_2012.pdf

Therefore, it appears that MMWD can not use glyphosate where coho are likely to be physically contacted by glyphosate, through air, water or soil. As MMWD is here notified of the findings of this study, it would seem prudent for MMWD to prohibit the use of glyphosate wherever it can make such contact with endangered species.

Thank you for your attention. If you have any questions, please feel free to contact me.

Sincerely,

Martha E. Ture
Fairfax, CA

Dain Anderson

From: Patricia Lesavoy <plesavoy@aol.com>
Sent: Friday, January 27, 2017 9:09 AM
To: Biodiversity, Fire and Fuels Integrated Plan EIR
Cc: Lawrence Bragman
Subject: Please Support MMWD's Biodiversity, Fire and Fuels Integrated Plan
Attachments: Small WS logo.pdf

Dear Mr. Anderson,

I strongly agree with Larry Bragman and others that it is crucial that MMWD's Biodiversity, Fire and Fuels Integrated Plan ("BFFIP") be given a chance to get off the ground.

In addition to the fact that herbicides do not eradicate the abundant non native invasive plants in question is the fact that the World Health Organization, International Agency for Research on Cancer has classified glyphosate (Roundup) as a probable carcinogen. As a resident of Marin County, I urge you to try this plan first before taking any drastic alternative which is arguably toxic to humans.

Thank you,

Pat Lesavoy, Ed.D.
Sr. Consultant Wonder Soil
plesavoy@aol.com
310-463-1778
www.wondersoil.com

Dain Anderson

From: Shannon Hart <shart415@me.com>
Sent: Friday, January 27, 2017 1:06 PM
To: Biodiversity, Fire and Fuels Integrated Plan EIR
Subject: Marin water treatment plan

Hi,
I am a resident in Fairfax & am contacting you to support this new plan to deal with Mt. Tam watershed that insures toxic herbicides won't be used. I urge you to omit use of toxic substances as an option from the final, approved plan. Revisit later if you must, but keep our precious water clean & toxin free.

Thank you for your time & consideration.

Warmly,

Shannon Hart
Bolinas Road
Fairfax, CA 94930

Dain Anderson

From: tomthur <tomthur@aol.com>
Sent: Friday, January 27, 2017 6:05 AM
To: Biodiversity, Fire and Fuels Integrated Plan EIR
Subject: No Toxic Herbacides PLEASE

Hi,

I am concerned about Marins drinking water if toxic herbacides are used for plant cobtrol on Mt. TAM..
Please help keep our water clean.

Thank you,

Tom
Fairfax

Sent from my Verizon 4G LTE smartphone

Dain Anderson

From: David Carbonell <dacarbon@gmail.com>
Sent: Saturday, January 28, 2017 4:34 PM
To: Biodiversity, Fire and Fuels Integrated Plan EIR
Subject: BFFIP EIR comment

Hello, my name is Dave Carbonell and I am a resident of Fairfax. I am an emergency medicine physician, cancer survivor, and mountain bike coach as well. I'd like to comment on the MMWD BFFIP.

I have two major concerns. Primarily, I'd like to voice my opposition to the use of toxic herbicides in the Watershed. We must preserve the Watershed for future generations, and keep our water as clean and pure as possible. Please do not allow toxic herbicides in the watershed!

Similarly, I would like the BFFIP to address horse manure as well. A recent study published by Dominican University demonstrates how horse feces spreads non-native, invasive species. It's also a public health issue for people who walk and ride bikes on watershed roads and trails.

Here is a link to the study. Please address equine feces as part of the BFFIP, as the spread of broom and other invasive species are severely detrimental to the watershed. Thank you!

https://www.nps.gov/pore/learn/management/upload/rps_invasiveplants_and_horsemanure_060718.pdf

Dave Carbonell, MD
dacarbon@gmail.com

Dain Anderson

From: David Simon <cejocky@gmail.com>
Sent: Saturday, January 28, 2017 5:29 PM
To: Biodiversity, Fire and Fuels Integrated Plan EIR
Subject: Fire and Fuels Integrated Plan ("BFFIP") public comment

Re: Fire and Fuels Integrated Plan ("BFFIP")

To whom it may concern,

I would like the BFFIP to address horse manure in and around MMWD properties. A recent study published by Dominican University demonstrates how horse feces spreads non-native, invasive species. I would hope that this issue is addressed by the Fire and Fuels Integrated Plan. Many equestrians use the MMWD watershed lands and have access to over 60% of narrow trails, primarily for hiking, 100% access to fire roads and there are even equestrian stables that are on or adjacent to MMWD lands. I have lived in Marin for many years and I have never seen any attempts to mitigate the spreading of invasive plant species by equestrians. I feel that in order for the Fire and Fuels Integrated Plan to be effective horse fecal matter needs to be controlled and mitigated by any means possible including a blanket ban of these animals from MMWD property.

Here is a link to the study and anl excerpt I thought relevant to the spread of invasive species in MMWD lands. Please address equine feces as part of the BFFIP, as the spread of broom and other invasive species are severely detrimental to the watershed. Thank you!

https://www.researchgate.net/publication/232672121_Germination_of_Invasive_Plant_Seeds_after_Digestion_by_Horses_in_California

"Thirty-two plant species emerged from these fecal samples, 24 of which were not native to California. None of these were identified on the California Department of Agriculture's Noxious Weed List, which is used as a basis to certify equine feed as weed free. However, seven of the non-native species are identified as moderately invasive on the California Invasive Plant Council's (Cal-IPC) list. These species are: Hirschfeldia incana, Hordeum marinum, Lolium multiflorum, Mentha pulegium, Rumex acetosella, Trifolium hirtum, and Vulpia myuros. In addition, the following four non-native plants are listed at the limited invasiveness level on the Cal-IPC list: Hypochaeris glabra, Lythrum hyssopifolium, Medicago polymorpha, and Poa pratensis."

David Simon
5156 Paradise Drive
Tiburon, CA 94920

--

Dave Simon

415 328 8615

January 28, 2017

Dear MMWD Board Directors:

Huge praise to you on the BFFIP "no pesticide" plan to manage vegetation in MMWD's watershed. I was a member of the town committee that worked on a pesticide ban in Fairfax in the 1980s. The Town Council eventually adopted this position with an ordinance which is still in place. So, it's extraordinarily gratifying to see that you are onboard to protect environmental health and to recognize the limits and severe risks posed by using chemical pesticides in an effort to control vegetation.

Those who advise keeping chemical weed control substances 'in the toolbox' are apparently uninformed that toxic herbicides have been demonstrated to not eradicate non-native plants, especially broom. Furthermore, they are minimizing the seriousness of the WHO's research classifying glyphosate as a likely carcinogen. With the increasing toxic load from more and more chemicals being introduced in our environment and with climbing cancer rates and declining life expectancy in the US, Marin can lead by example right here in our watershed by not contributing to that poisonous buildup.

After living in the county for decades and on a hill with high fire danger, I recognize the substantial risk posed by wildfire. In addition to many of the excellent recommendations made for non-toxic weed management, I'd like to reiterate one I shared with your board at least 15 years ago: Hire a coordinator to recruit, organize and manage massive volunteer efforts to hand-pull broom, etc. For example, a former student of mine, who also addressed the Board, offered to bring his entire Boy Scout troop, as well as other local troops, to put in the hard work. Certainly, the Boy Scouts and other community-minded, service-oriented groups would rise to the occasion when given the opportunity to protect our community from fire danger without poisoning the environment.

Thank you for keeping chemical pesticides out of MMWD's 'toolbox'.

Sincerely,

Jim Rice
192 Laurel Drive
Fairfax, CA 94930

Dain Anderson

From: Lita Zigounakis <litazig28@yahoo.com>
Sent: Saturday, January 28, 2017 11:06 AM
To: Biodiversity, Fire and Fuels Integrated Plan EIR
Subject: pesticides on Mt Tam

Please keep the insecticides from all our natural resources that will be affected on Mt. Tam. This I a crazy idea.Come on, let's use common sense! Lite zigounakis

Dain Anderson

From: Pamela Turley <pamayla2003@gmail.com>
Sent: Saturday, January 28, 2017 1:42 PM
To: Biodiversity, Fire and Fuels Integrated Plan EIR
Subject: No Pesticides for Mt. Tam watershed

No pesticides for Mt. Tam watershed.
Thank you, Pamela Turley
35 Sequoia Rd. Fairfax, 94930

Dain Anderson

From: Skippy <skippyskippyskippy@gmail.com>
Sent: Saturday, January 28, 2017 3:35 PM
To: Biodiversity, Fire and Fuels Integrated Plan EIR
Subject: Toxic herbicides on Mt. Tam

Toxics have no place “in the toolbox” in our watershed, or any watershed. The average BABY is born with 250+ chemicals already in their bloodstream. Nonnative invasive are a huge problem, but there are better solutions. Poisoning our water should not be “in the mix.”

Sara Dudley
Member, Fairfax Open Space Committee
Fairfax, CA

Dain Anderson

From: Brian Raphael <brianraphael94903@gmail.com>
Sent: Sunday, January 29, 2017 11:15 PM
To: Biodiversity, Fire and Fuels Integrated Plan EIR
Subject: BFFIP concerns

Hello, my name is Brian Raphael and I have been a San Rafael resident most of my life. I am a freelance filmmaker and outdoor enthusiast. I would like to comment on the MMWD BFFIP.

There are two concerns that I would like to address, the first being about the use of toxic herbicides. I do not support their use and urge you not to allow the degradation of our water supply by their use.

The next concern of mine, in which I would like the BFFIP to address, is horse manure on the trails. Not to mention the public health issue on watershed roads and trails, a recent study by NPS and Dominican University found that horse feces disperse non-native, invasive plant species. As we have seen how destructive broom is to the watershed, I hope this issue can be addressed as part of the BFFIP.

Here is a link to the study:
https://www.nps.gov/pore/learn/management/upload/rps_invasiveplants_and_horsemanure_060718.pdf

Thank you,

Brian Raphael

Dain Anderson

From: Don Schwartz <drdonschwartz@yahoo.com>
Sent: Sunday, January 29, 2017 6:43 AM
To: Biodiversity, Fire and Fuels Integrated Plan EIR
Subject: Toxic Herbicides

I Support the MMWD plan to ban the use of toxic herbicides in the Mt. Tam watershed. And, pesticides, too—in case anyone's asking.

Don Schwartz
Larkspur

Don Schwartz Services

Dain Anderson

From: mrsstim@gmail.com
Sent: Monday, January 30, 2017 9:53 AM
To: Biodiversity, Fire and Fuels Integrated Plan EIR
Subject: no toxic poisons

i fully support the ban on the use of toxins on our marin county lands. that we even have to be discussing this in 2017 is an embarrassment.

andy ross
sausalito

Dain Anderson

From: SLAKEWINGS@aol.com
Sent: Monday, January 30, 2017 3:58 PM
To: Biodiversity, Fire and Fuels Integrated Plan EIR
Subject: No poisons innn the MMWD lands

I'm writing to say that I agree with and support the new plan to eliminate all pesticides/poisons from being used on watershed land. No poison is ever necessary. After extensive glyphosate/Roundup use, we all have glyphosate in our bodies, adding to rates of cancer and chronic illness. Most public lands still use massive amounts, in spite of the harm to the wildlife, environment, and humans. I believe a lot of the reason is kickbacks from Monsanto, etc.

The MMWD is now an inspiration to other Bay Area agencies. Please help to continue this.

Thank you,
Bev Von Dohre

Dain Anderson

From: Catriona MacGregor <catriona.macgregor@comcast.net>
Sent: Monday, January 30, 2017 11:00 AM
To: Biodiversity, Fire and Fuels Integrated Plan EIR
Subject: Please Ban the Use of Pesticides in the Mount Tam Watershed ASAP

Hi

I have worked in habitat management for over 30 years.

I could write a long detailed list of why pesticides are harmful and how important it is especially now with the rapid declines in beneficial insects and animals and birds - but I think at this stage its pretty clear to all.

Thank you

Catriona Glazebrook, J.D., M.S., R.M.A

Dain Anderson

From: Christine Dames <christie@techtalkstudio.com>
Sent: Monday, January 30, 2017 2:27 PM
To: Biodiversity, Fire and Fuels Integrated Plan EIR
Subject: Support Ban on Toxic Pesticides in Our Watershed

Importance: High

Please ban toxic pesticides in our watershed. We are so grateful for your wisdom to know how best to protect our land, water, animals and people of the Watershed. This is important as California just opened the way for Roundup and Glyphosate to be listed as carcinogenic. I fully support this ban of toxins and thank you for doing so.

Christie Dames
San Anselmo Resident

Christie Dames
TechTalk / Studio
415.460.9940
christie@techtalkstudio.com

" I am here to live out loud ! " Emile Zola

Dain Anderson

From: Erika Dachauer <dandedachauer@yahoo.com>
Sent: Monday, January 30, 2017 10:33 PM
To: Biodiversity, Fire and Fuels Integrated Plan EIR
Subject: toxic herbicides

We are residents of Novato and we would like to voice our desire to have the MMWD stop using toxic herbicides, (especially glyphosate!) in our water shed! Please, please, stop poisoning the residents of Marin county with this horrible stuff! Thank you for your consideration of this matter and please keep us apprised of your decision.

Sincerely,
David and Erika Dachauer

Sent from Yahoo Mail on Android

FRIENDS OF
CORTE MADERA CREEK
WATERSHED

January 31, 2017

Dain Anderson
Environmental Services Coordinator
Marin Municipal Water District
220 Nellen Avenue
Corte Madera, California 94925

RE: Scoping for BFFIP EIR (submitted via email to **bffipeir@marinwater.org**)

Dear Mr. Anderson,

We appreciate the opportunity to provide comments on the scope of the Environmental Impact Report (EIR) to be prepared for the Biodiversity, Fire, and Fuels Integrated Plan (BFFIP). This comment letter follows the organization of the Initial Study (IS), distributed with the Notice of Preparation for the EIR. Our comments are focused on three resource areas: Biological Resources, Geology and Soils, and Hydrology and Water Quality. In addition, we have comments on adaptive management and the range of alternatives.

Biological Resources

The IS says that the EIR will analyze impacts to special-status species, impacts to sensitive natural communities, impacts to federally protected wetlands and waters, and impacts to habitat used by migratory wildlife. This will provide a very limited analysis.

The title of the plan includes the word *Biodiversity*, yet the EIR focuses on special-status species and sensitive habitats. We request that the EIR evaluate impacts from the spread of invasive plants to populations of not only special-status wildlife species and habitats, but also more common species and habitats—the whole of biodiversity. Some invasive species, particularly French broom, have not been effectively controlled during the past decade. MMWD's limited ability to manage invasive plants with the BFFIP as proposed is likely to impact all native species and habitats. Furthermore, analysis of the impacts of fire management actions should focus on biological resources.

We also request that the EIR evaluate the feasibility of successfully protecting biodiversity when such large expenditure will be necessary. Whenever MMWD's customers are asked to pay more for water, there is enormous resistance, so it seems unlikely that adequate funding will be available to fully implement the proposed BFFIP.

Hydrology and Water Quality; Geology and Soils

We request that the EIR analyze the impacts of fire (especially in areas with extensive stands of mature, fire-prone French broom) and surface disturbances (e.g., from mechanical treatments) on the following resources:

- native vegetation;
- wildlife populations;
- water quality;
- populations of aquatic organisms, including invertebrates, amphibians, and fish;
- changes in geomorphology.

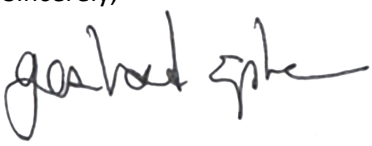
Adaptive Management and Integrated Pest Management (IPM)

The EIR should analyze how to incorporate current scientific information on weed management when the BFFIP does not acknowledge that the use of herbicide may indeed be the best management tool in some situations. THE BFFIP also includes puzzling references to MMWD's "IPM," but in fact the BFFIP does not incorporate IPM by any standard definition.

Alternatives Analysis

The EIR is clearly incomplete if it does not include an alternative that includes the ability to use herbicides. The decision to omit herbicide use could be reversed; providing an alternative that includes herbicide use is feasible.

Sincerely,



Gerhard Epke
President

Dain Anderson

From: Gail Joerger <gjoerger@comcast.net>
Sent: Monday, January 30, 2017 10:22 PM
To: Biodiversity, Fire and Fuels Integrated Plan EIR
Subject: No toxic herbicides please!

Please do not allow the use of toxic herbicides in Marin water lands. They have been proven cancerous in many studies around the world and with Marin already having one of the highest rates of breast cancer, thought to be caused by the use of toxic chemicals after WWII, we do not need to add to the serious problem with more toxins in our environment.

I'm currently fighting breast cancer and live in Mill Valley. This is a very serious issue for me and I need you to represent women like me in your decision to prevent the use of toxic herbicides for Marin.
Thank you

Gail Joerger
80 Matilda Ave
Mill Valley Ca 94941

Dain Anderson

From: hildesimon@comcast.net
Sent: Monday, January 30, 2017 7:10 AM
To: Biodiversity, Fire and Fuels Integrated Plan EIR
Subject: native plants vs horse poop

Re: Fire and Fuels Integrated Plan, public comment.

To whom it may concern,

I would like to address the dangers and risks that horse feces pose to native flora here in Marin. Perhaps you need to learn that the primary way California became so threatened by exotic and invasive plants (weeds) from the very start of so called western expansion was from the Spanish Padres migrating up the coasts and valleys with their...horses! They brought their European horse feed and because of this, millions of acres of pristine California coast and inland valleys became covered with invasive exotics, pushing out and killing native species.

Excuse me, but this is the 21st century, not the 17th or 18th century. Horses continue to spread exotic invasive weeds via their feces and we should not just accept this as part of the status quo.

https://www.researchgate.net/publication/232672121_Germination_of_Invasive_Plant_Seeds_after_Digestion_by_Horses_in_California
"Thirty-two plant species emerged from these fecal samples, 24 of which were not native to California. None of these were identified on the California Department of Agriculture's Noxious Weed List, which is used as a basis to certify equine feed as weed free. However, seven of the non-native species are identified as moderately invasive on the California Invasive Plant Council's (Cal-IPC) list. These species are: Hirschfeldia incana, Hordeum marinum, Lolium multiflorum, Mentha pulegium, Rumex acetosella, Trifolium hirtum, and Vulpia myuros. In addition, the following four non-native plants are listed at the limited invasiveness level on the Cal-IPC list: Hypochaeris glabra, Lythrum hyssopifolium, Medicago polymorpha, and Poa pratensis."

Are we modern humans capable of changing this arrangement? The time has come to limit where these polluting beasts can do their damage to our environment here in Marin.

Thank you,
Hilde Simon
5156 Paradise Drive,
Corte Madera, CA. 94925

Dain Anderson

From: Jessica Kasimatis <jessicakasimatis@gmail.com>
Sent: Monday, January 30, 2017 4:28 PM
To: Biodiversity, Fire and Fuels Integrated Plan EIR
Subject: Eliminate use of herbicides in Mt. Tam Watershed

Hello-

I wanted to add my support to the movement to ban the use of toxic herbicides and other poisons in the Mount Tam Watershed. This is a wonderful step in preserving our environment and water supply.

Thank you.

Jessica Kasimatis
229 C Street
San Rafael, CA 94901

Dain Anderson

From: Kim Jupe <kljupe@yahoo.com>
Sent: Monday, January 30, 2017 4:58 PM
To: Biodiversity, Fire and Fuels Integrated Plan EIR
Subject: No to Toxic herbicide

Hello,

I wanted to ask that nontoxic herbicides be used on MtTam as suggested in the new plan.
I appreciate your consideration.
Kim Jupe
Sent from my iPhone

Dain Anderson

From: Lynette Carlton <rlcarlton@gmail.com>
Sent: Monday, January 30, 2017 1:02 PM
To: Biodiversity, Fire and Fuels Integrated Plan EIR
Subject: No toxins in Marin watershed

Wow! That is such great news! I am absolutely in favor of no toxic herbicides or pesticides in our watershed.

Thank you for finding alternative means to control unwanted vegetation!

Sincerely,
Lynette Carlton
Fairfax

Dain Anderson

From: Megan Fleming <megflecar@gmail.com>
Sent: Monday, January 30, 2017 5:11 PM
To: Biodiversity, Fire and Fuels Integrated Plan EIR
Cc: Neka Pasquale; Alex Eckhart; Ashley Jordan Gordon; Betsy Anderson; Thayer Allyson Gowdy; bj@insidecircle.org; Brian; brooke@projectintimate.com; Bay Bertea Finney; Emily Swanson; sgtemail@aol.com; Jane Johansen; Jodi Riviera; Annice Kenan; Kelly Mekonenn; kendrasmoot@mac.com; noguchiperkins@gmail.com; Liina Poder; nicole myer; Michelle Bell; Mimi Towle; sunnygal88@gmail.com; bex@rebeccaurban.com; Lauren.Silver@rocketmail.com; Deborah Tien Price; Rachel Paluska; simmonita@gmail.com; Ahri Golden; Annie Parr; Adina Niemerow; dana@danadamara.com; Lisa Mercury-Rea; Pat Gonzales; Melissa Parhm; pautaylo@gmail.com
Subject: Protecting Marin Water

To the Folks at Marin Waters,

I am writing in regard to the new plan to manage vegetation proposed by the Marin Municipal Water District. As a resident of Marin County, I am opposed to the use of any herbicides for various reasons. Herbicides are not overall successful in achieving the eradication of invasive plants, especially non native varieties. Also, there is overwhelming evidence that the ingredients in herbicides are detrimental to human health. There are ways to achieve desired results without putting our water supply at risk. I want my opinion to be heard, and I know many Marin residents who share my opinion. I have included others on this email who may contact you with additional comments.

I would like confirmation that herbicides were ruled out in the final plan. If there is still any consideration that herbicides are being considered, I would like to speak with someone directly about this.

Thank you kindly,

Megan Fleming

Sent from my iPhone

Dain Anderson

From: Peggy Keon <peggykeon@gmail.com>
Sent: Monday, January 30, 2017 7:41 AM
To: Biodiversity, Fire and Fuels Integrated Plan EIR
Subject: use of Roundup

I absolutely support the MMWD plan to ban the use of Roundup in the Mt. Tam watershed — or anywhere! There is no doubt about the effects of glysophate, now found in our food chain became of its widespread use which has led to the contamination of our water supplies and farmlands, in fact, throughout our communities. Glysophate is a known carcinogen, not just "probably" as stated but he World Health Organization. Research organizations throughout the world have proven that over and over again,

Roundup is absolutely NOT another tool in the toolbox. It is a killer.

Please assure that no Roundup or any other product containing glysophate is not used in the Mt.Tam watershed or anywhere else in our beautiful county!!

Margaret Keon
5 Vineyard Way
Kentfield

Dain Anderson

From: rosiedeangelo@gmail.com
Sent: Monday, January 30, 2017 5:51 PM
To: Biodiversity, Fire and Fuels Integrated Plan EIR
Subject: Ban toxic herbicides

MMWD

Please note my support for banning toxic herbicides and protecting the MTWS.

Kindly,
Rose

Rose De Angelo
600B Locust st
Sausalito, CA
94965
(415) 686-1380
Sent from my iPhone

Dain Anderson

From: susan goldsborough <susangoldsborough@icloud.com>
Sent: Monday, January 30, 2017 6:17 AM
To: Biodiversity, Fire and Fuels Integrated Plan EIR
Subject: Herbicide use

Please stop the use of herbicides throughout the entire MMWD. I am at high risk to develop lymphoma because I have lupus. According to doctors at Stanford, herbicides are causative for lymphoma. Hand clearing is labor intensive but is a sustainable way to rid the district of invasive plants.
Susan Goldsborough

Dain Anderson

From: Tim Scherer <timothyscherer@icloud.com>
Sent: Monday, January 30, 2017 9:27 PM
To: Biodiversity, Fire and Fuels Integrated Plan EIR
Subject: The Marin Post

Hello,

I live on Mt Tam and spend a lot of time up there. I am in favor of the ban.

https://marinpost.org/blog/2017/1/27/support-the-mmwd-plan-to-ban-the-use-of-toxic-herbicides-in-the-mt-tam-watershed-by-feb-3rd

Tim Scherer
tim@aptcap.com
(415) 244-8466

Dain Anderson

From: Vennie <venniey@comcast.net>
Sent: Monday, January 30, 2017 10:03 AM
To: Biodiversity, Fire and Fuels Integrated Plan EIR
Subject: No herbicides on Mt Tam please.

Dear sir, the water I drink, I cook with and bath in comes from the Mt Tamalpais watershed.
It is not smart to apply toxins where they will be washed into our water source.
Thank you for ensuring that no herbicides are used on our watershed.
Thank you, Vennie Yancy

Sent from my iPhone

Dain Anderson

From: Bill Hill <aropoika@gmail.com>
Sent: Monday, January 30, 2017 12:43 PM
To: Biodiversity, Fire and Fuels Integrated Plan EIR
Subject: ban toxic herbicides in our watershed

As a long time marin resident in Fairfax, I commend the MMWD in banning toxic herbicides in our watershed.

William A. Hill
141 Lansdale
Fairfax CA 94930

aropoika@gmail.com

Dain Anderson

From: Barbara Petty <barbarapetty@barbarapetty.com>
Sent: Tuesday, January 31, 2017 2:35 PM
To: Biodiversity, Fire and Fuels Integrated Plan EIR
Subject: vegetation plan

Hi there,

I am writing with BIG support of managing the vegetation in the watershed without toxic chemicals.

Thank you!!

Barbara Petty

Barbara L. Petty, CPA
769 Center Blvd #19
Fairfax, CA 94930
415-459-5543 p
415-459-5573 f
www.BarbaraPetty.com

Dain Anderson

From: BJ Wasserman <wassiji@yahoo.com>
Sent: Tuesday, January 31, 2017 2:51 PM
To: Biodiversity, Fire and Fuels Integrated Plan EIR
Subject: MMWD

No more herbicides in our water shed please:

"...herbicides cannot and will not eradicate nonnative invasive plants. Also, scientific evidence has led the World Health Organization, International Agency for Research on Cancer to classify glyphosate (the main ingredient in RoundUp herbicide) as a probable carcinogen."

No more!

Thank you

BJ Wasserman
Mill valley resident

Dain Anderson

From: Carrie Carrier <carrielcarrier@gmail.com>
Sent: Tuesday, January 31, 2017 2:37 PM
To: Biodiversity, Fire and Fuels Integrated Plan EIR
Subject: Strongly support the NONTOXIC approach to watershed management
Attachments: LetterOpposingPesticides_Marin_2017Jan31.doc

Dear Marin Municipal Water District,

I am writing as Chair of the Topanga Creek Watershed Committee, collaborator with the Marin-based Moms Against the Spray (MOMAS) and an environmental advocate, who has spearheaded several green initiatives to keep our environment safe. I encourage ecologically and socially responsible practices in the community. The consequences of widespread pesticide/herbicide use in and around our community are quite serious and must be taken into account when setting policy. You see, I became an activist only after being inadvertently poisoned by a pesticide exposure at my former place of employment, a traumatic experience that permanently damaged my pancreas and triggered a heightened sensitivity to numerous chemicals, including fragrances. This incident has created a number of ongoing challenges for me that could have been avoided with a more prudent and precautionary pest management policy. Unlike many other "environmental factors" that can be caused by one's own poor choices, my exposure occurred without my knowledge (let alone my **informed consent**), and there was nothing I could do to prevent it.

QUALIFICATIONS: I have a graduate degree from NYU in Public Policy, with a focus on healthcare and public health issues. Given my background, I must first challenge the false belief held by some that toxic chemicals, such as pesticides (which include herbicides, insecticides, fungicides, rodenticides, etc), are "containable" or "safe." First, pesticides of all kinds-from rodenticides to fungicides, are known to be fairly volatile and mobile substances. Whether it be through volatization and drift, migration in soil, suspension/dissolution in water or bioaccumulation in a mammal's tissues, pesticides tend to be quite persistent and/or mobile-especially when paired with the surfactants and "inerts" (misnomer) that constitute the majority of pesticide product formulations.

PESTICIDES: THE MYTH THAT HERBICIDES ARE 'SAFER'

One quick thing that I would like to clear up before proceeding is that herbicides ARE pesticides (i.e. toxic synthetic chemicals designed to kill "pests), and they are subject to the same federal laws under FIFRA as insecticides, rodenticides, and fungicides due to their known potential to have adverse impacts in human and environmental health. A common misconception among many individuals is that herbicides are less toxic than insecticides or rodenticides because they target plants, not animals. I can understand how people might mistakenly construe that an herbicide would be less toxic than a poison designed to kill a more complex organism, but that assumption is actually entirely false. Multiple studies, such as this one recently published (February 2014) in the peer-reviewed journal, B*iomedical Research International*, "Major Pesticides Are More Toxic to Human Cells Than Their Declared Active Principles," show that herbicides and fungicides can be even more toxic than insecticides when considered as part of an overall product formulation.[1] Given the role that "inerts" (aka "adjuvants," "synergists," "surfactants") play in a pesticide product's efficacy and the high degree of toxicity of many of these "inert" ingredients, it is inexcusable that they are not required to be studied in tandem with the active ingredient when assessing a pesticide product's toxicity. A pesticide should be tested in whatever formulation it will be applied in the real world...
(**for my complete letter, please see attached Word doc**)

[1] Mesnage, R., Defarge, N. et al. “Major Pesticides Are More Toxic to Human Cells Than Their Declared Active Principles,”in Biomed Res Int. 2014; 2014.

Kindly,

Carrie

--

Carrie L. Carrier
Topanga Town Council, Vice President
NWF Certified Wildlife Habitat - Topanga Leader
Topanga Creek Watershed Committee, Chair
Email: carrielcarrier@gmail.com
Tel: 646.483.2926

Dain Anderson

From: Charlotte Fuller <charlotte.fuller@rocketmail.com>
Sent: Tuesday, January 31, 2017 4:03 PM
To: Biodiversity, Fire and Fuels Integrated Plan EIR
Subject: I support the ban of pesticide use on Mt. Tam watershed!!!!

I support the ban of pesticide use, especially Round Up type products with glyphosphate within, around, on Mt. Tam anywhere in MMWD watershed!!!!

Thank You!

Faith is the willingness to follow the truth wherever it leads :)

Charlotte Fuller
235 bolinas Rd. #6
Fairfax, CA 94930

http://charlottefuller.com/
415-717-6705

Dain Anderson

From: Evangeline <efugazzotto@comcast.net>
Sent: Tuesday, January 31, 2017 6:58 PM
To: Biodiversity, Fire and Fuels Integrated Plan EIR
Subject: MMWD's BFFIP

Hi,

I fully support not to implement the use of toxic carcinogenic glyphosate, especially because it all filters down to our drinking water!

Thank you!

Evangeline Fugazzotto
Green Girl Gardens
GreenGirlGardens.net

Dain Anderson

From: Garrett Plante <garrett.plante@workday.com>
Sent: Tuesday, January 31, 2017 3:25 PM
To: Biodiversity, Fire and Fuels Integrated Plan EIR
Subject: I support the ban on toxic pesticides on the Tam Watershed

Garrett Plante
25 Raven Rd
San Anselmo CA 94960

Dain Anderson

From: Georgia Gibbs <georgiagibbs@me.com>
Sent: Tuesday, January 31, 2017 6:14 PM
To: Biodiversity, Fire and Fuels Integrated Plan EIR
Subject: please follow your plan

Please follow your plan that is free of toxins. Thank you. Georgia Gibbs

Georgia Gibbs
Hillside Drive
Fairfax, CA 94930

Dain Anderson

From: Gretchenkoles@gmail.com
Sent: Tuesday, January 31, 2017 6:44 PM
To: Biodiversity, Fire and Fuels Integrated Plan EIR
Subject: Herbicides on public land

Hello!

I wholeheartedly support the proposal to ban the use of herbicides on our public land. I have cancer and it's really important to me that I minimize my exposure to carcinogens. Plus I hate the thought of anyone being exposed to it.

Thank you so much for working to further such an important cause. This affects every one of us and the people who come after us. Let's care for our land and water and keep it free of carcinogens!

Best regards, Gretchen Koles

Sent from my iPhone

Dain Anderson

From: Laura Garcia <tresxgarcia@comcast.net>
Sent: Tuesday, January 31, 2017 7:19 PM
To: Biodiversity, Fire and Fuels Integrated Plan EIR
Subject: Pesticide ban

I support the pesticide ban on Mt. Tamalpias.
Laura Garcia
Sent from my iPad

Dain Anderson

From: lewwheeler@gmail.com on behalf of Lew Wheeler <lew@internetrugs.com>
Sent: Tuesday, January 31, 2017 4:44 PM
To: Biodiversity, Fire and Fuels Integrated Plan EIR
Subject: No toxic Herbicides

Please do not use toxic herbicides in the Marin watershed.

Thank you,

Lew Wheeler
14 Mariele drive
Fairfiax, C. 94930

--
Lew Wheeler

Dain Anderson

From: Michelle Schumacher <michelle@grklaw.com>
Sent: Tuesday, January 31, 2017 3:21 PM
To: Biodiversity, Fire and Fuels Integrated Plan EIR
Subject: Let Marin's Watershed be Pesticide Free

Good afternoon,

To say that I am delighted by the watershed management plan that is not using “Cide’s” to kill I am so thankful. I am very familiar with the studies that are showing great harm to the pollinators, humans and animals alike. There is no reason when there are many solutions to a problem to do something that causes damage and even more problems. Thank you for being a leader in this regard. I hope that the pesticide free plan is approved unanimously and thank you for being leaders in this area.

All my best

Michelle

Dain Anderson

From: Sagar Wanaselja <k_sagar_wanaselja@yahoo.com>
Sent: Tuesday, January 31, 2017 3:33 PM
To: Biodiversity, Fire and Fuels Integrated Plan EIR
Subject: Please support a ban on herbicides

Just letting you know... I am a long term MMWD customer and Marin homeowner and I support a ban on all herbicides. Thanks!
Sagar Wanaselja

Sent from my mobile device.

Dain Anderson

From: velvy appleton <velvy@me.com>
Sent: Tuesday, January 31, 2017 12:49 PM
To: Biodiversity, Fire and Fuels Integrated Plan EIR
Subject: comment on BFFIP

Dear Mr. Anderson-
I am writing to express my support of a non-toxic future for the Mt Tam watershed.

PLEASE do not allow Roundup to be used in our precious watershed. It is POISON.
Let's be a model for the rest of the world in keeping our water and environment pure.

Thank you-
~v~

Velvy Appleton
Fairfax, CA

Dain Anderson

From: Claudia Gibson <claudiagibson@hotmail.com>
Sent: Wednesday, February 01, 2017 12:02 AM
To: Biodiversity, Fire and Fuels Integrated Plan EIR
Subject: Herbicides

We are having babies and raising them in a chemical stew & we wonder why these little people have so many health problems.
We are 4 generations in Marin & fully support Not using Any chemicals that can seep into our watershed.
Sane people don't poison their fresh water.
Everything we put on the hillsides gets into our water & there's no treatment to remove it. It builds up in our tissue. Our kids are full of environmental poisons. Isn't it time to go back to older tried & true methods of open space management.
In fact, we ought to use CCC to do old fashioned weeding. Poison oak, scotch broom, etc. removal.
Do one area at a time & they do wonders.
Plus it help the CCC
help others. We used to have crews that did that. Obviously we need them now. Dead trees, infected trees, Trail repair, broom removal, Poison oak removal. And it helps our wildlife to clean up the watershed.
And how about the volunteers that do that!
It's just not enough.
We need to also clean up the dead brush & woody dead thickets so we reduce the fire liability. All this rain will give us a bumper crop of growth-we need to have a plan.
Do you have a plan ready to implement?
Thank you.
Sent from Claudia Gibson's iPhone

Dain Anderson

From: Colleen Moore <cmoore@hydropoint.com>
Sent: Wednesday, February 01, 2017 11:30 AM
To: Biodiversity, Fire and Fuels Integrated Plan EIR
Subject: I support the ban

As a Marin resident I support this ban. Thank you.

Support the MMWD plan to ban the use of toxic herbicides in the Mt. Tam watershed by Feb 3rd<https://marinpost.org/blog/2017/1/27/support-the-mmwd-plan-to-ban-the-use-of-toxic-herbicides-in-the-mt-tam-watershed-by-feb-3rd>
Posted by: Diane Hoffman<https://marinpost.org/about/contributors/4646/diane-hoffman> - January 27, 2017 - 1:30pm

The Marin Municipal Water District has prepared a comprehensive new plan to manage vegetation<https://www.marinwater.org/documentcenter/view/4442> in the Mount Tam watershed which includes no toxic herbicides or any other poisons. This is what Marin residents have been advocating for years wanting to protect their health and water supply.

Some critics remain who support of using toxic herbicides as a "tool in the toolbox". They ignore the fact that herbicides cannot and will not eradicate nonnative invasive plants. They also ignore the overwhelming body of scientific evidence that led the World Health Organization, International Agency for Research on Cancer to classify glyphosate (the main ingredient in RoundUp herbicide) as a probable carcinogen.

Your input right now can make a difference.

You have until February 3rd to send in your comments to support the new plan and ensure that the use of toxic herbicides are not included in the final version.

_____

Email your comments to: bffipeir@marinwater.org<mailto:bffipeir@marinwater.org>

To view the plan visit:
https://www.marinwater.org/documentcente...<https://www.marinwater.org/documentcenter/view/4442>

Web Link
https://www.marinwater.org/documentcenter/view/4442

* [social-facebook-01] <https://www.facebook.com/>
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* [social-facebook-01] <https://twitter.com/share>
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* [social-facebook-01]

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<mailto:?subject=Support%20the%20MMWD%20plan%20to%20ban%20the%20use%20of%20toxic%20herbicides%20in%20the%20Mt.%20Tam%20watershed%20by%20Feb%203rd%20-%20The%20Marin%20Post&body=%0A%0ARead%20More:%0Ahttps://marinpost.org/blog/2017/1/27/support-the-mmwd-plan-to-ban-the-use-of-toxic-herbicides-in-the-mt-tam-watershed-by-feb-3rd>

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Dain Anderson

From: Diane Duvall <duvalldiane@me.com>
Sent: Wednesday, February 01, 2017 7:01 AM
To: Biodiversity, Fire and Fuels Integrated Plan EIR
Subject: thank you for the toxin-free plan!

Good Morning-

I am simply sending my support for the watershed vegetation management plan that ensures no toxins/ herbicides are used. Thank you!

Diane

Dain Anderson

From: K Furey <cleanfoodearth@gmail.com>
Sent: Tuesday, January 31, 2017 4:54 PM
To: Biodiversity, Fire and Fuels Integrated Plan EIR
Subject: NO to Toxic Herbicides added to WATER SUPPLIES for ANY REASON

To Marin Municipal Water District, Department of Water Resources

I urgently support the MMWD plan to ban the use of toxic herbicides in the Mt. Tam watershed. Water travels the world, and what is poisoned ANYWHERE will eventually reach EVERYWHERE. Flint water, after 2 YEARS IS STILL POISONED with LEAD. Even after a visit from President Obama, saying it was OK to drink Flint Water a half year ago, it is still POISON and NO OFFICIAL has been indicted, arrested or set a plan to clean it up. These are CRIMES AGAINST HUMANITY AND ECOCIDE.

The World Health Organization, International Agency for Research on Cancer, in 2015, has classified glyphosate (the main ingredient in RoundUp herbicide) as a probable human carcinogen. A CA Judge last week in Fresno, decided to drop Monsanto's lawsuit against the state and will clear the CA Prop 65 Toxics List to add glyphosate (RoundUp), which will mandate labeling is as poison.

No more toxics in our water. We are being poisoned to death. 80,000 UNREGULATED chemicals riddle our food, water, industry, personal products and household items, and adding toxics FOR ANY REASON to WATER is unacceptable. It is a criminal offense.

K Furey
Sacramento, CA

Dain Anderson

From: Nancy Morita <nancymorita99@gmail.com>
Sent: Wednesday, February 01, 2017 10:20 PM
To: Biodiversity, Fire and Fuels Integrated Plan EIR
Subject: Morita letter of support BFFIP
Attachments: mmwd letter.pdf

Dear Dain Anderson,

Attached please find my letter encouraging you and MMWD to support the BFFIP, a no pesticide plan to manage vegetation in the Mt. Tamalpais watershed.

Thank you for your kind consideration.

--Nancy Morita

Dain Anderson, Environmental Services Coordinator
Marin Municipal Water District
220 Nellen Avenue
Corte Madera, CA 94925
<bffipeir@marinwater.org>

February 1st, 2017

Dear Dain Anderson,

I am writing to you to encourage you to support the Biodiversity, Fire and Fuels Integrated Plan (BFFIP), a no pesticide plan to manage vegetation in the Mt. Tamalpais watershed.

My belief, based on about forty years of field observations and hands-on habitat restoration work, is that the introduction of toxins such as herbicides into the environment is shortsighted and destructive, and therefore should be avoided.

On my own property, acreage of a mixture of grassland and mixed oak-bay-madrone-toyon-buckeye forest, my family has, like your agency, had to deal with infestations of many invasive exotic plants, principally French, Scotch and Portugese brooms, and also thistles and numerous prolific and aggressive introduced grasses. I can appreciate how daunting this can be, and how painstaking is the process of restoring a native habitat. Yet, I also see how the process has roots that go very deep -- the preservation of the (often unseen) native flora, the fragility of the (also often unseen) amphibian, invertebrate, fish, and other species that know these lands to be their only home. My experience is that there is far more life in the soil and habitat of even the most severely (e.g. broom) impacted lands that is vitally important to the future essential diversity of life there. This diversity is best served, in my experience, by a stewardship ethic which does not include the use of toxins.

Rachel Carson was observant, wise and brave to counsel us that any kind of poison does not just target one thing (as their manufacturers purport), but puts everything else at risk. In her time, DDT was deemed as safe as Round-Up (glyphosate) is considered by many now. Both have similar claims and both are wrong that they can target just one thing and not destroy another. Neither one is safe.

I believe that it is possible to form a healthy and tending relationship with land and life when great care is taken. I think that perhaps in your shoes you may feel that in order to "save" a large area of land you might be willing to poison it a "little bit." But I believe that the best way to restore habitat is with great caution and respect. Of course this takes great effort and work, but patience has its rewards that are often subtle and mysterious yet powerful and profound.

For all of these reasons I encourage you to support a no pesticide approach to the stewardship of the Mt. Tamalpais lands under your care.

Thank you for your kind consideration,

Nancy Morita
Wild in the City
99 Iron Springs Road
Fairfax, CA 94930

Dain Anderson

From: Roberta Anthes <robertaanthes@aol.com>
Sent: Wednesday, February 01, 2017 11:03 AM
To: bffipeir@marinwater.org.
Subject: Exclude Herbicides From BFFIP

Dear MMWD Representatives,

I'm writing to support the exclusion of herbicides from the Draft Biodiversity, Fire, and Fuels Integrated Plan. When a large body of evidence convinces the World Health Organization to classify glyphosate as a human carcinogen, I think we should listen. While there are financial costs to leaving this toxin out of the process, there are greater human costs to including it.

I hope you will continue to follow the Precautionary Principle and put human wellbeing in front of financial expedience.

Thank you.

Roberta Anthes
2 Snowden Lane
Fairfax, CA
415-721-0906

Dain Anderson

From: Susannah Barley <susannahbarley@yahoo.com>
Sent: Wednesday, February 01, 2017 8:15 PM
To: Biodiversity, Fire and Fuels Integrated Plan EIR
Subject: Mt. Tam watershed

To whom it may concern,

I and my family are thrilled to learn that The MMWD has prepared a comprehensive new plan to manage vegetation in the Mt. Tam watershed which includes no toxic herbicides or any other poisons. Thank you. Please ensure that the final version remains this way, for the sake of our children and the environment. We applaud your approach and commitment to our health and well-being.

Sincerely,
Susannah Barley

Susannah Barley
195 Bothin Road
Fairfax, CA 94930
(415) 461-1193

Dain Anderson

From: Zen Honeycutt <zenhoneycutt@gmail.com>
Sent: Tuesday, January 31, 2017 11:38 AM
To: Biodiversity, Fire and Fuels Integrated Plan EIR; Nichelle Harriott
Subject: Gravely concerned about toxins in CA water
Attachments: Screen Shot 2017-01-31 at 7.05.57 AM.png; Screen Shot 2017-01-31 at 7.08.03 AM.png; Dept of water resources.pdf

Dear Marin Water Municipal Water District,

I am a California Resident and I travel often around the state with my children who are chemically sensitive. I am gravely concerend that CA has the most toxic water in the USA mainland. I ask Marin County to REDUCE and restrict the toxins which are sprayed on or near our water supply for ANY reason, including algae and plant control.

You can see from the images and PDF attached that seriously toxic chemicals have been and we could surmise, ARE being sprayed in our water. You will notice that Diquat is listed. If the the common brand Resolva, is being used, it is half glyphosate*.
https://en.wikipedia.org/wiki/Diquat
This is unacceptable. All of these toxic chemicals are unacceptable.
You may disagree because the "EPA has determined these chemicals are safe." However the EPA approval process is faulty.
The EPA only requires the safety studies of the ONE declared active chemical ingredient, never the final formulation, so any claims that the final formulations, these herbicides used on our water supply, are *safe* are completely unfounded.

Please discontinue this practice now and put restrictions on the use of glyphosate based herbicides, which promotes* the growth of algae, within the necessary surrounding areas of water ways. The restriction of Roundup and glyphosate based herbicides (a carcinogen, neurotoxin and endocrine disruptor) would therby eliminate the need to use further chemicals which prevent algae growth.

I appreciate your response and committment to the safety of our water and citizens.

Thank you!
Zen Honeycutt
Founder, Moms Across America
Mission Viejo CA 92691
M. 949-307-6695

Empowered Moms, Healthy Kids

http://momsacrossamerica.org
---
http://www.facebook.com/MomsAcrossAmerica

Restore your gut health, reduce inflammation and renew your health!
http://www.momsacrossamerica.com/health_solutions_store

"I always wondered why somebody didn't do something about that, then I realized I am somebody." - source unknown

Dain Anderson

From: Bob Kopelman <bobkopelman@hotmail.com>
Sent: Thursday, February 02, 2017 12:26 PM
To: Biodiversity, Fire and Fuels Integrated Plan EIR
Subject: Support for BFFIP

Hi Dain,
This is a short email supporting the BFFIP especially as regards non-use of pesticides such as Roundup. No need for me to repeat what I'm sure is in plenty of other emails. Mine is a well considered opinion even though I won't go into details here.

I think most people in Marin strongly support a non-toxic environmental approach to problems of all sorts, and specifically want our MMWD to find ways to address issues without the pesticide "tool" in its toolbox. It may look easier and cheaper today to use a toxic chemical in our watershed, but we have to take into account all the costs, direct and indirect, implicit in such a decision. Therefore I support the approach of the BFFIP.

Thank you,
Bob Kopelman
321 Cypress Drive
Fairfax, CA 94930

Dain Anderson

From: Mettagraphics <mariah@mettagraphics.com>
Sent: Thursday, February 02, 2017 11:24 AM
To: Biodiversity, Fire and Fuels Integrated Plan EIR
Subject: MMWD plan to ban use of toxic herbicides in Mt. Tam watershed

I want to add my voice here in strong support of the new plan to manage vegetation in the Mt Tam watershed without the use of toxic herbicides.

In light of the health concerns and the scientific evidence by the WHO and the International Agency for Research on Cancer that glyphosate (the main ingredient in RoundUp herbicide) is a carcinogen, this is clearly the best path forward!

Sincerely,

Mariah Parker

Marin Audubon Society

P.O. Box 599 | Mill Valley, CA 94942-0599 | marinaudubon.org

February 1, 2017

Dain Anderson
Marin Municipal Water District
220 Nellen Avenue
Corte Madera, CA 94925

RE: Scoping Comments on

Dear Mr. Anderson:

The Marin Audubon Society appreciates the opportunity to submit scooping comments on the Draft *Biodiversity, Fire, and Fuels Integrated Plan* (Plan). MMWD's responsibilities to provide high quality water to its customers and to maintain healthy ecosystems as a land owner require the same protective actions. MAS requests that the following questions and comments be addressed in the EIR and the Plan changed accordingly:

1. Biodiversity. The plan is entitled *Biodiversity, Fire, Fuels Integrated Plan*, but it fails to address Biodiversity. It only addresses plants. Biodiversity is not just plants. Biodiversity includes all species that interact and are integral parts of the ecosystem of MMWD lands including mammals, birds, fish and invertebrates, and all need to be addressed as part of biodiversity. The ecological services these species provide include aerating soil, fertilizing soil, pollinating plants, controlling plant growth by foraging, and others, that contribute to species health, survival and diversity.

2. Ecosystem Importance. Discuss the importance of maintaining healthy ecosystems to best ensure high quality water to customers and flourishing wildlife and plant populations. Why is it important to control invasive weeds? Why is a healthy ecosystem a resilient ecosystem? Why is a balanced resilient ecosystem important in the face of climate change?

3. Species/Habitat Protection. The Plan includes a list of *Special Status Species Known to Occur Or with Potential to Occur on MMWD Lands* (Appendix D) but there is no discussion of how wildlife species function as essential components of the ecosystem and how the District manages its land to protect and allow native wildlife to thrive. These services should be addressed.

Protecting species and habitats is discussed at Management Action 14 "Revise *BMPs to protect Special Status Species and Otherwise Rare Species and Critical and Sensitive Habitats from Construction or Maintenance Actions"* and Approach 2.3 *"Prevent the loss of special status plant species, populations and other sensitive resources."* The discussion of this approach says that the "District will strive to avoid damage to sensitive resources when conducting activities on the watershed .... While implementing measures to avoid or reduce impacts to the degree feasible." This approach and action address projects that are already approved. BMPs only address construction related impacts. Our interest is in ensuring projects that will adversely impact species and habitats do not reach the construction stage. The DEIR

should explain how and whether MMWD decides whether to redesign or to not move forward with a project, such as a new tank or trail project, as they become aware during early project planning that environmental impacts would or could result.

Discuss the impact of removing forest understory, including shrubs and grasses, on ground dwelling birds and other ground dwelling species. How are impacts to ground nesting and foraging birds considered in planning the removal of native vegetation?

Phytophtera infected dead trees are removed to reduce the risk of fire. Dead trees provide valuable nesting, foraging and roosting habitat for many species of birds. Are impacts to birds that depend on dead trees considered when deciding whether to remove dead trees? Is there consideration for leaving some dead/dying trees to provide habitat?

Figures 3-2 to 3-5 list invasive species other than broom that could, like broom, expand exponentially and be a threat to MMWD ecosystems? How does MMWD go about adding species to this list as they are identified by the early detection system? For example, Dettrichia has appeared in the county perhaps five or so years ago and should be of concern, but it is not on the list.

In addition to special status and other native species, MMWD lands support other important habitat types: Serpentine soil grassland habitats, wetlands, streams, seeps are all recognized as important natural communities. How these habitat types are protected should be addressed in the DEIR. An inventory of wetlands is overdue and should be scheduled for completion.

4. Fuel Management. Discuss measures to control fire, particularly fuelbreaks. To construct new fuelbreaks, vegetation is removed and must continue to be removed. What measures are taken to mitigate the impacts of the loss of native shrub and grass habitats in order to create fuel breaks and defensible space?

Each fuelbreak creates the need to remove vegetation in perpetuity, in order to maintain the target condition of no vegetation. No vegetation is an unnatural condition that is not sustained in nature. There would need to be complete shade or coverage of the ground with solid material. Ongoing maintenance of fuelbreaks can only be avoided in habitats that are restored with vegetation.

The more fuelbreaks that are constructed the more broom will increase, and maintenance needs will increase. According to the Plan, MMWD maintains 900 acres of fuel breaks and will construct 65 more miles (130 acres) of fuelbreaks are proposed under the Plan. This will create substantially more broom invasion. The Plan admits (page 3-18) that "The District's biological and wildfire goals are not met...at this time, but significant gains are possible. *Therefore, the long term approach is to increase the effort....*" The DEIR should describe the specific significant gains that it anticipates are possible. It does not appear that funding for ongoing maintenance would be increased. How far would the stated funding of $73,800 for annual broom maintenance bring MMWD toward eliminating or significantly reducing broom on its lands? What are the specific biological goals that are anticipated? The goal should not be presented in terms of hours spent or acres removed alone. The goal should be presented in terms of how many acres of broom-infested acres are anticipated to be reduced or eliminated in relation to the total amount of broom on MMWD lands. Also see #5 below.

Figures 2-11 through 3-14 show existing and planned fuelbreaks but there is no description or justification for their need. Are all of the existing and proposed fuelbreaks really necessary? Could some

be abandoned or not constructed? The MCOSD has been successful in reducing the number of fuelbreaks. MMWD should explore this possibility.

Discuss fuelbreaks vs defensible space. The MCOSD EIR discussed these two approaches in their 2015 Vegetation Management Plan and noted that "agencies strongly recommend that fuel breaks be minimized and resources applied to defensible space zones."(MCOSD Veg Mgt. Plan page 3-34). The DEIR should discuss how MMWD's fuel breaks are minimized and whether the defensible space approach is being used or could be used to reduce vegetative impacts. Describe MMWD's work with neighboring landowners to better and comprehensively manage invasive plants. Are there ways to require neighboring landowners to maintain defensible space so that MMWD's costs can be reduced?

5. Invasive Species Control. The DEIR should discuss the success of MMWD's current approach to controlling broom and other invasives. The Plan discusses specific acreages/amounts of invasive vegetation that are removed annually, but it is unclear what that means in terms of the past, the existing and the anticipated expansion of the population. A recent presentation by MMWD staff to the MCOSD reported that in 2003 broom areas on MMWD lands measured the size of 462 football fields while in 2013 the broom covered an area the size of 1117 football fields. This doesn't sound like an approach that is successful. The DEIR should describe the status in a manner that enables the reader to compare and evaluate the success of the current approach in terms of the historic and current broom populations on MMWD lands.

Table 2 shows that the cost of ongoing broom maintenance over the five year span of the plan is unchanged at $73,800 per year. How can the anticipated outcome of eliminating 768 gross acres of broom be achieved while, according to the Plan, maintaining 450 acres of permanent fuelbreaks that need to be maintained, the addition of 65 new acres of fuelbreaks, broom invading an average of 56 new acres per year, while the amount of funding for broom maintenance remains the same? How can the claimed 40% increase in broom treatment effort over 2017 levels be achieved? The potential for success of the proposed Plan in reducing the amount of broom in a meaningful way appears grim. And what does eliminating 768 acres mean in terms of the total amount of broom? The acres onto which broom has expanded must be factored into the evaluation.

6. Integrated Pest Management: The DEIR should describe what an IPM program is, including the gradual progression using a full range of tools and the circumstances under which treatment may progress to using herbicides when other methods prove ineffective.

There are references in the Plan to MMWD reviewing and updating its IPM policies and techniques (page ES-p5) Goal 3-A and Approach 3.5: "*Update the District's Integrated Pest Management (IPM) policies and techniques in response to new information.*" Management Action: MA-13 calls for "*Review and update Vegetation Management tool box program annually, including selection of criteria for tools and techniques.*" These references conflict with the current policy of not using herbicides. With the Board's removal of any use of herbicides even as a last resort, MMWD doesn't actually have an IPM program. IPM calls for the use of a full range of tools. Does this goal and action indicate that MMWD intends to review and update its policies including using herbicides?

7. Alternatives. One of the alternatives presented in the DEIR must be one that includes a complete IPM program that provides for limited use of herbicides as a last resort. Although some folks in the community may disagree with the use of any herbicides, it is in the public interest to present a broad range of alternatives including one that is an IPM Alternative. Limited use of herbicides by

professional applicators in a carefully controlled manner as part of an IPM program has been used successfully without environmental damage by other agencies and should be considered by MMWD.

The DEIR should describe MMWD's experience controlling broom and other invasives prior to the ban on herbicides, as well as the success or failure other jurisdictions that use herbicides have had controlling, reducing or eliminating broom and other invasives. The discussion should compare the successes/failures of invasive plant removal programs that have used herbicides with that of MMWD not using herbicides. The discussion should include the cost difference between the two approaches.

8. Monitoring. The Plan focuses attention on monitoring, which is important but is only part of what is needed. Monitoring in itself yields information, but it does not suggest further actions to correct or solve any problems. Monitoring can identify successes and problems and, thereby, inform the need for further action. The DEIR should discuss actions that will be taken to follow-up on problems identified by monitoring. For each monitoring category, there should be information on conditions that will trigger corrective action and what those possible actions might be.

The EIR should show on figures what MMWD lands would be expected to look like in 50 years if the current advance of broom continues.

Thank you for responding to our questions.

Sincerely,

Barbara Salzman, Co-chair
Conservation Committee

Phil Peterson, Co-chair
Conservation Committee

Dain Anderson

From: MCL <mcl@marinconservationleague.org>
Sent: Thursday, February 02, 2017 4:04 PM
To: Dain Anderson
Subject: Scoping comments for MMWD Biodiversity, Fire and Fuels Integrated Plan EIR
Attachments: adv_inv_BFFIP_EIR_mcl_2017.02.02.pdf

MARIN CONSERVATION LEAGUE
Protecting Marin Since 1934

February 2, 2017

BY EMAIL
Dain Anderson
Environmental Services Coordinator
Marin Municipal Water District
220 Nellen Avenue
Corte Madera, CA 94925-1169

Re: Scoping Comments for the MMWD Biodiversity, Fire and Fuels Integrated Plan Environmental Impact Report

Dear Mr. Anderson:

This letter conveys the scoping comments of Marin Conservation League on the Environmental Impact Report (EIR) for the Biodiversity, Fire and Fuels Integrated Plan (the BFFIP, or the Plan) prepared for the Marin Municipal Water District (the District). Items recommended to be included in the EIR are presented in boldface type for convenience.

Alternatives

The purpose of the EIR is to disclose to the decision makers (the MMWD Board) and the public all significant impacts of the Plan. These include significant impacts that could result from partial or unsuccessful management of invasive plants due to an incomplete set of management tools, or from deferred action in managing invasive weeds due to insufficient resources. To fully inform the public of such impacts, **the EIR needs to have an alternative that would include limited use of herbicides where essential to achieve management objectives, consistent with the principles of Integrated Pest Management (IPM).**

CEQA requires consideration of a "reasonable range of potentially feasible alternatives that will foster informed decision making and public participation." (All quotations in this and the next paragraph are from Section 15126.6 of the CEQA Guidelines.) The alternatives "shall include those that could feasibly accomplish most of the basic objectives of the project and could avoid or substantially lessen one or more of the significant effects." The BFFIP lists three objectives (Plan Goals, BFFIP Page 1-3). The "with herbicide" alternative could achieve all three of these objectives, and in so doing might lessen significant effects.

The choice of alternatives is subject to "the rule of reason," and should include those "necessary to permit a reasoned choice." Among the factors a lead agency may consider in eliminating an alternative are "regulatory limitations." It could be argued that the District's decision to drop herbicide use from the BFFIP is a de facto "policy" and therefore poses such a limitation. But this interpretation is inconsistent with the normal meaning of "regulatory limitation," which is a

limitation imposed on the lead agency by another agency, typically one with regulatory powers. In the present case, the District's decision to drop herbicides from the Plan does not constitute a regulation or policy, so that, in itself, should not render a "with herbicide" alternative infeasible.[1]

There are four other reasons for the District to consider analyzing a full IPM alternative in the DEIR. First, the "no herbicide" decision in the BFFIP was adopted without public review, even though it had the potential to result in significant environmental impacts due to the continued spread of invasive plants and the environmental disturbance caused by repeated mechanical and physical management treatments. An examination of the impacts of a "with herbicide" alternative would fill this void and foster informed decision making and public participation in the analysis of the environmental effects of the Plan. The greatest contribution of such an alternative would be in comparing the environmental impacts of the Plan with an alternative that could likely reduce the significant impacts.

The second reason is that portions of the watershed (roughly 3,350 acres) do not drain into any drinking water reservoir, and the District could adjust its herbicide policy in managing these areas while maintaining the policy in the rest of the watershed. **To fully inform the public, and to further support a "with herbicide" alternative, the EIR should include maps that show the areas of the watershed that do not drain into drinking water reservoirs.**

The third reason is that new techniques for managing invasive plants are constantly being developed. (Note Goal 3: ". . . Provide an adaptive framework for periodic review and revision . . . in response to changing conditions and improved knowledge.") It is possible that new herbicides might pose less risk of exposure, or existing herbicides might prove effective at greatly reduced concentrations, particularly when used in conjunction with other, developing techniques.

The fourth reason is that restricting invasive plant management to mechanical and manual techniques will mean that some invasive plants will be manageable not at all, or only to a limited degree, and others will be successfully managed but with significant disturbance to the environment. The public has a right to know if these plants could be effectively managed with the use of herbicides and with less significant impacts.

<u>Issues Regarding Invasive Plant Management</u>

The Plan calls for an annual review of the success or failure of project activities as part of its adaptive management strategy and a revision of project strategies and activities following such review. **The annual review should include an analysis of the successes and failures of the approaches and management actions as compared to the likely outcomes under the full IPM (with herbicide) alternative.** This analysis would inform any subsequent environmental review that the District conducted for any revisions to the scope of the Plan or to the nature of Plan activities. Any continuing failure to meet Plan goals could also lead to reconsideration of the "with herbicide" alternative.

The no project alternative should estimate the continued expansion of broom and other invasive plants for the Plan's five year lifetime, so that at the end of the 5–year Plan period there will be an estimated acreage of broom and other invasive plants to which the actual acreages after 5 years of the Plan can be compared. This comparison, as well as the comparison with the Plan's goals, will serve as a measure of the Plan's success or failure.

The Plan does not contain a list of all invasive plants on the watershed. **The EIR should contain a list of all invasive plants on the watershed as part of the baseline conditions description.**

The Plan lacks a clear and simple list of high-priority invasive plants. It describes efforts to manage three invasive plants (broom, goat grass and yellow star thistle) and then refers the reader to "dozens of other high priority weed species" shown on four maps in (Figures 3-2 – 3-5), Plan pp. 6-7, 3-11. This is not acceptable. The public should not be asked to read a mix of pages of text and map legends in order to understand what the District considers to be high-priority invasive plants. To meet CEQA's requirements for a clear statement of a baseline conditions and for clearly informing the public of the plants that the Plan prioritizes, **the EIR should contain a one-page table of high-priority invasive plants**, as did the 2012 Plan.

The EIR should list, and analyze the impacts from, invasive plants that are already so pervasive and widespread that the Plan will not try to manage them at all. It should also list, and analyze the impacts from, invasive plants that will not be managed for purposes other than fire protection (e.g. most annual grasses), since both categories will essentially be allowed to continue to reproduce and spread.

The EIR should also consider whether an invasive plant that is manageable now could, under the Plan, become so widespread and pervasive that it is no longer feasible or practicable to contain or manage it.

The EIR should contain a table showing the invasive plants that will be managed under the Plan, and for each plant the size in acres of any individual infestation that will be considered too large to be practical to try to manage for invasiveness (but not necessarily for fire) for this first period of the Plan. The purpose is to inform the public of the limits of the Plan and what the Plan will not do—and the likely significant impacts that would result.

The EIR should recognize the important biological values provided by "ordinary" habitat. Environmental studies often consider that only habitats that have special status plant or wildlife species, aquatic features or special geological characteristics deserve serious consideration, at the expense of "ordinary" habitats, such as wildlife corridors or nursery areas. The watershed is a treasure in its diversity of "ordinary" wildlife habitats. Item D, Biological Resources, in the Initial Study Checklist comes closest to addressing this point:((Would the project) "interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?"). This should be marked and discussed in the EIR as "Potentially significant," rather than "less than significant with mitigation, as in the Initial Study."

The EIR should consider whether and to what extent the watershed provides important examples of Marin's historic natural landscapes and wildlife habitats that deserve protection from invasive plants as historic resources. The popular and scientific literature on invasive plants contains arguments that preserving intact natural landscapes serves no evolutionary, scientific or public policy purpose. While these points can be debated, that debate ignores the historic, cultural, visual and educational significance of natural landscapes, including ordinary ones. The EIR could advance an important public policy purpose by also including an assessment of natural habitats as vital historical resources that contain important elements of California's landscape. This would include landscapes that are not pristine or extraordinary but are still sufficiently intact to retain their historical integrity. **Disturbance to these landscapes by uncontrolled invasive plants should be considered potentially significant impacts to historical resources.**

The EIR should describe and analyze the significance of the spread of invasive plants outside the areas where the Plan currently calls for invasive plants to be managed.

The EIR should establish thresholds of significance for the spread of each of the priority invasive plants on the watershed, ideally in both absolute acreage and in relative acreage terms.

The EIR should explain the Plan's goals for and achievements in invasive plant removal in terms of both absolute acreage and a percentage of overall acreage, (especially net acreage), in order to allow the public to judge the Plan's projected and actual positive impacts on the environment. For example, the Plan states that Management Action 24 will "remove 600 gross acres of broom by year 5." This absolute number is useful but much less informative than the statements that the Plan will "reduce goat grass to less than 5 percent of [spatial extent documented in] 2016" and that other invasive plants will be controlled to "achieve a 25 percent reduction in both weed cover and the level of effort needed to maintain it." Plan p. ES-8. Similarly, the figure for broom expansion on the watershed, stated as 56 acres a year, Plan pp. 1-8, 3-5 - 3-6 should be stated as a percentage of all mapped broom in order to be fully informative as a statement of a baseline condition.

Another example is in Section 7.3 on Anticipated Outcomes. The Plan states that "approximately 180 acres of diseased forest and oak woodland habitat will be treated to improve wildfire resiliency, reestablish desired stand structure, and enhance ecosystem function. This amount is approximately 5 percent of the anticipated need . . ." This statement

would be clearer if it included the absolute acreage of the "anticipated need." Similarly, the Plan states: "[a]pproximately 768 gross acres of broom in the Ecosystem Restoration Zone will be targeted for complete elimination . . . the total acres of unmanaged broom will decrease from 690 acres in 2017 to 475 acres in five years." This leaves the reader to do the math to understand the significance, in relative (percentage) terms, of these numbers. **As a general rule, both goals and results for all invasive plant management should be stated in both absolute numbers and relative (percent) numbers in order to fully inform the public.**

The EIR should describe the District's efforts to prevent, and analyze the impacts of continuing encroachment of invasive plants from neighboring properties. The Plan proposes to spend millions of dollars managing invasive plants, many of which appear to have migrated onto the watershed from neighboring properties. About 310 private residential properties are adjacent to or lie within 300 feet of the watershed. Plan p. 3-17. While the Plan describes District efforts to maintain fuelbreaks and defensible space near these properties, Plan, Figures 2-3 – 2-7, pp. 3-20, 5-7, it says nothing of District efforts to prevent the continued invasions of exotic plants *from* these properties. The management of invasive plants from a fuels perspective does not guarantee their management from an ecological perspective and may even exacerbate the spread of invasive plants. Other than a vague reference to "partnering" for fuels management, the Plan ignores the continuing invasion of plants from neighboring public and private properties as an ecological impact. The EIR should describe and analyze the impacts of such invasions and propose appropriate mitigation both to prevent this continuing impact and to hold neighboring property owners responsible for this impact.

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Other Issues

In the analysis of compliance with relevant ordinances, the EIR should address the potential discharge of weedy plant debris and plant reproductive parts (such as seeds, rhizomes and stem fragments) into watercourses, with reference to the county's stormwater ordinance, which defines "biological materials" as "pollutants" when discharged from point sources (e.g. dam spillways) or from non-point sources into watercourses without appropriate controls.

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Thank you for your attention to these comments.

Sincerely yours,

Kate Powers
President

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Chairman, Subcommittee on Invasive Plants

Marin Conservation League
175 N. Redwood Dr. Suite 135
San Rafael, CA 94903
415-485-6257

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Protecting Marin Since 1934

February 2, 2017

BY EMAIL
Dain Anderson
Environmental Services Coordinator
Marin Municipal Water District
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Sincerely yours,

Kate Powers
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Chairman, Subcommittee on Invasive Plants

SCOPE of MMWD's BFFIP

To: MMWD
From: Sandra Miller Ross, Ph.D., President Health & Habitat, Inc.

2/2/17

Below please find topics and points that would be helpful in your BFFIP – and comments.

SOIL HEALTH - Recently I attended a conference where soil health was part of the larger discussion of carbon sequestration and food production. Not only here, but other places I have been hearing for some years that healthy soil is the key to everything.

Plants naturally grow where they can, so the question is what is it about the soils on MMWD land that make it advantageous for "broom" to grow there? Is it a void that needs filling? Do the soils need the nitrogen that broom fixes there?

include in your BFFIP full soils analyses and search for new findings & ideas.

NATIVE - This whole idea of what plant is "native" is an artifact of time. The landscape was different under Indians, before Indians, during the ice age, and before there was a Mount Tamalpais. It is still changing – which is one of the reasons that broom came in.

Ever since there were plants, wind, and water, seeds were moved around. Look at the Galapagos Islands and how they were seeded not only with plants but with animals. Human occupation has been very disruptive to vegetation everywhere. It displaces grazing animals, changes drainage, causes micro climates, and brings in seeds that haven't had a chance to be there before.

Who are we to say that a particular point in time is what this or that land should have on it, and everything else should be kept out !? I recently heard that Native Plant Societies were actually started by pesticide companies as a free way to promote their products and champion their pseudo scientists. I'm sure none of our stalwart local native plant enthusiasts have ever heard this and will probably be outraged. However if you think about it, they are the strongest advocates for using pesticides (herbicides) to preserve the status quo and sometimes to re-introduce natives that were once there. Yet anyone with any common sense would be horrified at the idea of poisoning the watershed. Think how irrational this is – poison the watershed and surrounding lands just so someone can see a plant or know its there!

I love seeing wildflower displays. Yet if you think about it, what we see now, 50 years ago, or whenever, is a product of what seeds got there by many different methods, including animals and man – and what can survive there.

Mount Tamalpais is a natural landscape, not a native plant garden. It is considered the meeting place of flora & fauna from the north and south – sometimes the terminus of their ability to survive. Therefor their existence is tenuous and easily subject to change. But it is unconscionable to consider poisoning these lands to preserve a few species that may be headed for extinction anyway.

In the BFFIP consider what "native" means, especially in this time of rapid climate change. Are there species that could grow here which could be used along fire breaks & roads that would not "escape". Also consider what "scientific" means – often a tag to prove one's point. Its really opinion beefed up by like opinions.

BROOM - Generally it has been decided that “broom” is the enemy, and it must be destroyed. MMWD has done a heroic job of trying various eradication methods, most of which are labor intensive and fairly futile. Trying to eradicate it doesn’t work because of the seed bed and the original conditions of the soil which allowed broom to come in. It would not have thrived here if conditions had not been favorable.

Do you know how Marin got so much broom?? In the 1930’s Bertha Leach, wife of realtor Jim Leach, and several ladies decided Marin’s woods were too bare – and planted broom in many places. Forty years later Tamalpais Conservation Club tried to have the Legislature ban it from the State – but the Oregon growers complained, saying they had all these baby plants ready to ship. So the State relented – and the momentum was forgotten.

Maybe the best we can do is keep broom “at bay” - by methods that do not include poisoning. One of the biggest incursion of broom has been the fire roads; yet it’s the fire department that is pushing to get rid of broom. I’m not quite sure how, because their tires have carried the seed all up and down the lines. There are some ugly things that could be done like mowing it and putting down a layer of something thick enough to keep the broom from pushing through. Hikers will hate the looks and bikers could speed on it; but it would prevent spread and yearly maintenance – if done effectively. Broom came in because we degraded the area and now we want to get rid of it. I don’t know the answer –BUT ITS NOT POISON.

For your BFFIP consider how to contain the present stands in the interior of your property – and how to control it along the “roads” and trails where it has been spread by feet and tires – without poisons.

STAR THISTLE – I can remember meetings, starting some forty years ago, where MMWD was advised that star thistle was increasing along roads where they drove their vehicles and that their tires should be carefully cleaned. Yet the spread continued.

SOD - There are pathogens everywhere and always will be – sometimes in greater amounts. Mount Tamalpais is the meeting place of flora from the north and south, and therefore numbers of species are at their limit. Even minor changes in climate can make it so these species can no longer live here – or can more vigorously persist.

It would be instructive to consult with the Marin Carbon Project and others to find out if the right organic compost would be helpful for areas suffering from SOD. On the other hand, Nature may be showing us that their presence here is no longer viable. However, having areas of dead trees is a fire hazard and there may be simple efforts that could protect these trees.

Nearly a decade ago I treated my tanbark (and other) oaks with a product created by Lee Klinger. He believed that local Indians used a paste of seaweed and ground shells to enhance the trees that produced the acorns they wanted. I applied this paste (adding a tint to match the color of the bark). I also put shells around the base of nearby trees. Those that I treated this way have survived while others in the neighborhood have not. I’m not sure it’s practical to go around painting the bark on all the oaks, but one could consider putting ground shells throughout the forest at the appropriate time and location.

For the BFFIP, consult with Lee Klinger and those who know his work.

MARIN CARBON PROJECT - I remember vividly a presentation where it was shown that a thin layer of good organic compost on "degraded' rangeland revived it so that the native grasses returned. The people I spoke to recently not only were putting good, pure organic compost on their lands – sometimes as thin as a quarter inch on grasslands – but then were drilling in seeds of 14 types of local grasses. Results have been spectacular, and the grazing animals thrive on it.

For your BFFIP – Consult with Marin Carbon Project and similar organizations and efforts. Consider grazing, especially of species formerly native to the area – or something like goats in a controlled way, so they don't strip the madrone trees or deposit unwanted seeds; I remember a fire chief suggesting having chickens follow to eat the deposited seeds.

PG&E LINES - Clearing under PG&E lines is indeed critical so that their arcing will not cause a fire. This is an area where mowing and then covering the area with something through which the vegetation won't penetrate is justified.

FUEL BREAKS - Constructing new fuel breaks is necessary (given present circumstances) and should be done in such a way that it does not create more problems - such as encouraging broom, which then needs to be highly managed.

FORREST - Reducing fallen trees and brush under conifers and mixed hardwood stands will hopefully reduce chances of a wild fire. However, nothing will stop a major wild fire and smaller ones can usually be controlled by a rapid response from the borate bombers or similar. Decades ago I recommended to Barbara Boxer, that THE Navy helicopters in the East Bay be retrofitted with fire fighting foam capabilities. Unfortunately the idea died for lack of enthusiasm. Another idea was to ring the urban interface with a fire fighting foam system; however it was too expensive. As a precaution against arson, please use caution when publicizing your fire protection efforts.

FUNDS - I'm delighted that MMWD is ready and willing to increase by 200% the operational costs for this BFFIP. Seems to me that you were presented some years ago with figures that showed a small annual fee on everyone's bill would bring forth all the funds you could possibly need. **In the BFFIP consider this idea.**

NO POISONS - I applaud MMWD's efforts to not put poisons on their land – actually I should say our watershed. The idea that anybody would put these poisons on land from which we drink the water is preposterous. And for people to continue proposing it after its been declared a probably carcinogen by WHO is unconscionable. Proponents say it's a minute amount. I would remind everyone that it only takes a minute amount to make someone sneeze from dander, pollen, etc. Homeopathic medicines are not only diluted passed presence of a molecule, but go way beyond that. The more dilute they are, the more effective they are. Endocrine disruption from minute amounts is well understood, and can be more devastating and long lasting than a short lived acute poisoning.

In the BFFIP annual review and update of the Vegetation Management Tool Box, please do not be too quick to add pesticides just because some of the project outcomes have not been as successful as you would wish. It takes time and patience.

Dain Anderson

From: Aaron Gilliam <agcypress@gmail.com>
Sent: Friday, February 03, 2017 4:00 PM
To: Biodiversity, Fire and Fuels Integrated Plan EIR
Subject: Addition to BFFIP public comment

Hello again Mr Anderson,
I forgot to add this one, yet vital bit to my lengthly public comment document.

I would like the BFFIP to make an inventory of all grazable lands in the MMWD and to rate them based on their grazing opportunity. This would take into consideration the various goals already set out by the BFFIP including fuel load reduction, invasive plant management and would ideally include potential for soil building and improvements to the ground water recharge basis.
Thank you very much,
Aaron

Central Coast
Rx Fire Council

February 3, 2017

Marin Municipal Water District
220 Nellen Ave.
Corte Madera, CA 94925

Dear Mr. Dain Anderson,

Thank you for the opportunity to comment on the Marin Municipal Water District Draft Biodiversity, Fire, and Fuels Integrated Plan.

The Central Coast Rx Fire Council promotes the use of prescribed fire to maintain natural diversity in California and Marin County's fire adapted ecosystem.

We were surprised by the minimal amount of prescribed fire proposed as Management Action 23, which call for 100 acres of forest understory prescribed burning, and Management Action 24, which calls for 350 acres of prescribed burning of grasslands and open oak woodlands, over a five year period.

Of approximately 20,000 acres of Marin Municipal Water District holdings, a prescribed fire goal of less than 100 acres annually on average is almost insignificant and will fall short of restoring and protecting functional and resilient forest and woodland regimes on Water District lands.

Central Coast Rx Fire Council

We sincerely hope that a reconsideration of the annual goals be reviewed in light of the fire deficit on lands unburned that have a natural fire return interval of two to thirty years.

Low to moderate intensity prescribed fire is preferable to the inevitable high intensity conflagration that will surely come if positive action is not taken now to return excessive fire fuel loads to a more natural and less threatening condition.

We recommend increasing the understory Management Action 23 to a minimum of 100 acres annually, and grassland and oak woodland Management Action 24 to a minimum of 200 acres annually.

It is understood that there are many obstacles to successfully conducting prescribed fire projects for the care and maintenance of Marin Municipal Water District lands.

This is an opportunity to meet the challenge of increasing threat of high intensity stand replacement fire with controlled low intensity fire that contributes to forest health and resilience while protecting life and property in adjacent communities.

Thank you for the privilege of these comments.

Yours truly,

Joe Rawitzer

Project Coordinator
Central Coast Rx Fire Council
831 224 0459
www.centralcoastrxfirecouncil.org

Central Coast Rx Fire Council

Central Coast Rx Fire Council PO Box 1715 Carmel Valley, CA 93924
www.CentralCoastRxFireCouncil.org

Dain Anderson

From: Eileen Kelly <eileen@digyourgarden.com>
Sent: Friday, February 03, 2017 8:06 AM
To: Biodiversity, Fire and Fuels Integrated Plan EIR
Subject: MMWD No Pesticide Plan

Dane, I am in favor of the No Pesticide plan to manage vegetation in the Mt. Tam watershed and keep them and any other toxic chemicals out of our water! I am a landscape designer and always strive to encourage my clients not to use pesticides in their landscapes. I hope my vote counts for the MMWD plan! Thank you and good luck. Eileen Kelly

Eileen Kelly
office: 415.453-8591 / cell: 415-602-6282
email: eileen@digyourgarden.com
web: digyourgarden.com
houzz: houzz.com/pro/digyourgarden
facebook: facebook.com/digyourgarden
pinterest:pinterest.com/digyourgarden

Tiburon, February 3, 2017

Dain Anderson, Environmental Services Coordinator
Marin Municipal Water District
220 Nellen Avenue
Corte Madera, CA 94925

Via Email: bffipeir@marinwater.org

Dear Mr. Anderson,

I appreciate the opportunity to submit the following comments on the scope of the EIR for the Biodiversity Fire and Fuel Integrated Plan (BFFIP) (Plan), prepared by Panorama Environmental, Inc. for Marin Municipal Water District (District).

First, I commend the District board of directors for their policy decision not to use herbicides on the watershed, as there are still many unresolved or conflicting science-based study results regarding harm to biological organisms, the latter ranging from bacteria, fungi, insects, and herptiles to mammals, including humans, especially the very young, the elderly and those with compromised immune systems. Invoking the Precautionary Principle with respect to chemical use on a watershed that supplies water to hundreds of thousands of people is a rational decision. Those who claim that banning herbicides has negative environmental consequences and therefore merit CEQA review, only consider vascular plants, specifically broom-species, without concern for other biological organisms contributing to biological diversity, the enhancement of which is the District's second goal after fire fuel reduction. Therefore, I do not see the CEQA requirement to consider "a reasonable range of potentially feasible alternatives that could eliminate or reduce significant impacts of the plan" to pertain to an Alternative using herbicides on MMWD lands. - Also, California regulators relying on a finding by the France-based International Agency for Research on Cancer (IARC), which is considered a gold standard for cancer research, may require Monsanto to label its popular weed-killer Roundup with warnings that it could cause cancer (The Associated Press Jan. 27, 2017).

Please address the following issues in the EIR for the Plan with specific attention to my queries shown in italics.

Fuelbreaks

1. **Table ES-1 "**Conceptual Zones" (p. ES-1). *Clarify management goals in fuel breaks and define perennial weeds.*
    a. "Optimized Fuelbreaks are characterized by the absence of perennial weeds." Unless "weeds" also refers to native plants, because they grow "where they are not wanted" (not an ecological definition), the word "weeds" needs clarification. Usually, the vehicle with the extended mechanized "saw-arm" mows down all vegetation, including native plants – some potentially special-status species of *Ceanothus* and *Arctostaphylos* that grow on the watershed. *Explain how the District's "…..biological goals are met within these fuelbreaks…".*
    b. "Transitional Fuelbreaks" are characterized by the presence of persistent, yet small populations of perennial weeds that undermine the fuel break function. The goal is "fully eliminating perennial weeds from this zone." *Will native perennial vegetation be saved within the fuelbreaks?*
    c. The District's biological goals are met within the "Fuelbreaks Completed by Others" because the "leaseholder's vegetation management must be reviewed and approved by the District to ensure that it meets District standards for fuel reduction, natural resource protection, and other policies." Leaseholders, including NPS, MCOSD, CSP, and PG&E, use herbicides to manage invasive species on their lands. *Will the District enforce its goals and policy to remove only "perennial weeds" without the use of herbicides, if the fuelbreak is within the reservoir watershed?*

2. **Table ES-3** (p. ES-7)
    a. MA-20. "Remove all reproductive broom annually in the optimized and transitional fuelbreaks." *Is "perennial weeds" limited to reproductive broom (see above)? Will other perennial weeds such as Cotoneaster, Harding grass, and tall fescue not be removed?*
    b. MA-21. The District will construct an additional 65 acres of fuelbreaks on the watershed, a large contiguous piece of land. The 1995 VMP recommended a series of fuelbreaks that were intended to subdivide the watershed into discrete parts, making it easier to keep a wildfire from moving from one section of the watershed to another. *Were those firebreaks ever constructed and if so, are they still functional?* Firebreaks are "avenues" for weed invasion into native plant communities (consider Mt. Tam!).
    c. As "District lands support nearly 100 miles of service roads" (p 2-6), most of which are supposedly adequate as fuelbreaks, *explain why there is a need for 65 more acres of fuelbreaks? Convert 65 acres to length in miles.*

Invasive species

Provide a comprehensive list of all non-native species known to occur on the watershed and a separate list (or table as in WPHIP) of those species that are slated for management. About 250 non-native species occur on District land, but only "a few dozens of these species cause major impacts, and even fewer have been identified as targets for vegetation management by the district." (p. 3-5*). Explain what is meant by "major impacts." Discuss what criteria are used to identify the targeted species. (See below about forget-me-not and Veldt grass.)*

3. **Sec. 3.3.2 (**p. 3-11) states that species that not yet "cover large portions of the watershed, but has the potential to "…change ecosystem processes, lower habitat quality, reduce local biodiversity…" will be evaluated. Forget-me-not (*Myosotis latifolia*) and Veldt grass (*Ehrharta* spp.) are such species that pose risks to biodiversity and should be removed while it is still feasible and practicable, but they are not included as "priority weeds" on maps of the watershed (Figs. 3-2 –3-5). These plants spread rapidly along roads and trails, providing a nearly 100 percent absolute cover in a short period of time, especially within the mixed evergreen forest community. (These species have spread at an exponential rate at Mt. Tam State Park and at S.P. Taylor State Park, where they are managed in places.)
    a. A District representative stated at a meeting in the fall of 2016 that the District only manages plants that cause "structural damage." *Clarify what is meant by "structural damage." Can herbaceous plants such as forget-me-not and Veldt grass cause such damage?*

4. **Sec. 3.3.2 (**p. 3-5) states that broom populations are expanding at a rapid rate and that populations have "expanded 15 feet in five years, which correlates with the expansion rate of three feet per year." Such an expansion translates to the invasion of "an average of 56 acres per year." *Provide an estimated density of broom stands on the 56 acres that are being invaded per year. Are these 56 acres previously* ***un-infested***? Without knowing if these acres were "broom-free" in the past, as well as having a broom frequency estimate, it is not possible to assess, if 56 acres is an alarmingly large area with dense stands, or a strip that could be weeded along the edges of existing stands (such as along fuelbreaks). Realizing that a broom seedpod can explosively eject seeds ca three feet from the mother plant, it would seem that the invasion of 56 acres would occur along the edge of existing stands. *With increased funding and, consequently, manpower, could the ED/RP program cover the newly infested acres to reverse the trend of an increase in broom acreage each year?*
    a. Describe where it is impossible to "hold the line" of broom and why?

5. **Sec. 5.2.4 MA**- 4 (p. 5-5) states that the District will complete the inventory and mapping of grassland communities and identify projects to preserve these communities. *Could the lack of completed mapping indicate that there are unmapped stands of broom on the watershed?*

6. The District will conduct active forest management to improve the health and resiliency of forests on the watershed, including protecting and expanding conifer species such as Douglas-fir (p. 3-23. Douglas-fir, a "weedy" species on Mt. Tam, has spread into other plant communities, where invasion into chaparral is especially troubling.
    a. *Elaborate on "protecting and expanding…..Douglas fir.*

7. **Sec. 5.2.4** MA-4 (p. 5-5) recommends "Removal of encroaching Douglas-fir and coyote brush to maintain or slightly expand existing grassland." MA-24 (ES-8) "Improve grassland and oak woodland in the Ecosystem Restoration Zone" states that Douglas-fir will be thinned on 200 acres annually. Item 6 (p. ES-10) states that "Douglas-fir encroachment will be managed on approximately 620 acres of oak woodlands and/or grasslands…."
    a. *Elaborate on the need to remove Douglas-fir and coyote brush that are encroaching on grasslands*. Removing these two species should be a priority in order to maintain open grasslands, an important community for numerous plant and animal species.
    b. *Provide an approximate estimate of how many acres of grassland versus oak woodland will be thinned of Doug-fir during five years - "to slightly expand"existing grassland.*

8. *Explain why there is no mention of the greatest threat to biodiversity on the watershed, namely the invasion of non-native annual grasses (Avena* spp.*, Briza maxima, Festuca perenne, Cynosurus echinatus).* These species should be included in a list of invasive species and an attempt to remove them should be made at least in sensitive habitats and habitats supporting special-status plants. (The Plan recommends "thatch removing activities such as prescribed burning, mowing, and grazing" in areas with a 15-percent cover by bunchgrasses, and these activities may remove or control some of the annual species mentioned above and their cover.)

Special-status Species

9. **Approach 2.3 "**Prevent the loss of special status plant species, populations, and other sensitive resources" (p. 4-5) states: "To prevent the loss of special-status plants, the district will reintroduce historic populations of special-status plant species, where suitable habitat can be identified. *Explain the difference between "historic populations" and "extirpated species." Are only species with existing populations on District land being reintroduced, or will known extirpated species also be introduced? Discuss where*

seeds or other propagules will be obtained for such re-introduction efforts? Will propagules be obtained from areas other than District lands or from seed banks? If so, gene pools native to the watershed will not be preserved. Collecting seed from extant populations on the watershed will reduce the seed source in those populations and may negatively impact the populations, hence the species.

Extirpated Species

10. **Appendix E – Table E-1.** Separate out and place under a subheading the four species that are considered fire followers (*Apiastrum angustifolium, Pentachaeta alsinoides, Phacelia suaveolens, Sidalcea hickmanii* ssp. *viridis*). "Extirpated" and "effectively absent" do not denote the same thing, unless the time of seed survival of these species is known. (The Plan (p. 4-5) states that the District may reintroduce fire to explore the possibility of seed germination of fire-dependent species.)

Thank you for considering the above issues in the EIR for the BFFIP.

Sincerely yours,

Eva Buxton

Botanist

111 Hacienda Drive
Tiburon, Ca 94920
415 435-2745
evabuxton@sbcglobal.net

Dain Anderson

From: Jane Richardsonmack <janerichardsondesign@gmail.com>
Sent: Friday, February 03, 2017 2:27 PM
To: Biodiversity, Fire and Fuels Integrated Plan EIR
Subject: no pesticide plan

Hello:

I am writing to support the continuing ban on using ANY pesticides anywhere near our watershed or on any land.

I salute you for being the guardians of our lovely water.

Thank you,
Jane Richardson-Mack
49 Madrone Road
Fairfax, Ca. 94930

Dain Anderson

From: Mari Anoran <anoran108@gmail.com>
Sent: Friday, February 03, 2017 2:40 PM
To: Biodiversity, Fire and Fuels Integrated Plan EIR
Subject: Toxin Free Please

I support the new plan to mitigate toxin use on Mt. Tam!

Thanks,

Mari Anoran
San Anselmo

Marin Chapter
California Native Plant Society

February 3, 2017

Dain Anderson, Environmental Services Coordinator
Marin Municipal Water District
220 Nellen Avenue
Corte Madera, CA 94925-1169

Via Email: bffipeir@marinwater.org

Dear Mr. Anderson:

The Marin Chapter of the California Native Plant Society (CNPS) submits the following comments on the scope of environmental analyses to be included in the Environmental Impact Report (EIR) for the MMWD's Draft Biodiversity, Fire and Fuels Integrated Plan (BFFIP). Our main concern relates to the EIR's analysis of the environmental impacts of fuelbreaks coupled with failure to control invasive weedy species. These actions, taken together, may impact negatively many native plants and plant communities on MMWD lands.

BFFIP GOALS AND ACTIONS

The BFFIP acknowledges that wildfire and invasive species are clear threats to biological diversity and ecosystem function on MMWD lands (Sec. 1.3). It points out that these two threats are interrelated and that they may also be exacerbated by other factors such as climate change (Sec. 3.1). The BFFIP further recognizes the likelihood that construction of fuelbreaks may contribute to the introduction and spread of invasive species.

The BFFIP also proposes specific vegetation management actions to reduce risks from these threats (Sec. 6.2).

Information in the BFFIP indicates that previous success in reducing infestations of weedy species was achieved before use of herbicides was eliminated from the MMWD's integrated pest management (IPM) program (Sec. 1.5.1). Although the BFFIP promises to use "best approaches" to control weeds (Sec. 4.2.3), other agencies managing weeds in the same general geographic area (e.g. U.S. National Park Service, Marin Parks) currently include herbicides as one set of tools in their IPM programs.

Although the BFFIP includes an adaptive management section (Sec. 4.2.3) that allows specific vegetation management tools to be changed if conditions warrant in the future, weed infestations, like epidemics, grow exponentially. Thus, the same amount of effective action taken early will prevent much more harm than it will if implemented later. If action is delayed, the opportunity cost is significant.

For these reasons, CNPS fears that the very valuable vegetation resources on MMWD will be needlessly lost to invasive plant infestations because of an inflexible and scientifically unsupported approach to the use of herbicide.

CNPS therefore urges MMWD to assure that the EIR includes the following:

- Analysis of the effectiveness and costs of management actions taken before and after MMWD banned herbicides.
- Evidence collected by MMWD on the difference in outcomes with respect to invasive plant control when herbicides are included or not included in its IPM program.
- Evidence that the proposed management actions will in fact result in realization of the stated goals, compared to alternative techniques.
- The scientific basis supporting MMWD's preferred and other alternative management actions on invasive plants and fire risk.
- An analysis of the timing of management actions in relation to their effectiveness.
- Scientific background reports pertaining to all proposed alternatives.
- Current scientific research concerning size and placement of fuelbreaks, including tradeoffs between reducing fuel loads by increasing breadth and extent of fuelbreaks and increasing flammability and reducing biodiversity by encouraging replacement of native species by invasive ones.

APPLICABLE LEGISLATIVE, COUNTY AND CNPS POLICIES

CNPS urges MMWD to adhere to the following relevant policies in the formulation of alternatives in the EIR:

- Section 21156 of Division 13 of the California Public Resources Code states that "It is the intent of the Legislature in enacting this chapter that a master environmental impact report shall evaluate the cumulative impacts, growth inducing impacts, and irreversible significant effects on the environment of subsequent projects to the greatest extent feasible." In the present case, "cumulative impacts" include the increasing effects in each subsequent time period of the exponential growth of invasive species.

- Section 21002 of Division 13 of the same Code also states "The Legislature finds and declares that it is the policy of the state that public agencies should not approve projects as proposed if there are feasible alternatives or feasible mitigation measures available which would substantially lessen the significant environmental effects of such projects." MMWD already has substantial information on the effectiveness of IPM programs that include and do not include herbicides. This information suggests that judicious inclusion of herbicides in its IPM program could reduce the total negative environmental effects of invasive species as the whole BFFIP is implemented.
- The fuelbreak policy set forth in the County's recently-completed Vegetation Management and Biodiversity Plan. See http://www.marincounty.org/~/media/files/departments/pk/projects/open-space/vmbp/2015_05mcpvmbpv9lowresweb.pdf?la=en. See in particular Pages 3-32 to 38 and 4-66 to 69.

  There, the County recognized that fuelbreaks are generally most effective when placed at the perimeter of natural preserves rather than in the interior. It adopted a decision–making matrix that will be used to evaluate each fuelbreak in terms of utility and environmental impact with the intention of possibly removing some of them.
- The California Native Plant Society's own policies on IPM and herbicide use. See http://www.cnps.org/cnps/conservation/pdf/IWM_policy.pdf and http://cnps.org/cnps/conservation/pdf/Herbicide_policy.pdf).

Thank you for the opportunity to comment.

Sincerely,

Paul DaSilva, Director
Marin Chapter, California Native Plant Society

Carolyn Longstreth, Director
Marin Chapter, California Native Plant Society

Priscilla Bull
505 Woodland Road
Kentfield, CA 94904

February 3, 1017

BY EMAIL

Dain Anderson
Environmental Services Coordinator
Marin Municipal Water District
220 Nellen Avenue
Corte Madera, CA 94925-1169

Re: Scoping Comments for the MMWD Biodiversity, Fire and Fuels Integrated Plan Environmental Impact Report

Dear Mr. Anderson:

METHODS FOR CONTROL ON INVASIVE SPECIES

Section 6.3.1 states that "Only manual and mechanical approaches will be used to manage vegetation under this Plan. Herbicide use is not included in this Plan."

MA-27 commits the District to conducting experiments and trials to identify suitable methods for control of invasive species.

The EIR should clarify whether the Plan would permit experiments and trials including the exploration of scientific information regarding new and modified herbicides and application techniques (Goal 3).

Thank you for your consideration.

Sincerely,

Priscilla Bull

Dain Anderson

From: Sustainable Fairfax <sustainfx@gmail.com>
Sent: Friday, February 03, 2017 4:05 PM
To: Biodiversity, Fire and Fuels Integrated Plan EIR
Subject: Sustainable Fairfax Comment re: BFFIP

Dain Anderson
Environmental Services Coordinator
Marin Municipal Water District
220 Nellen Avenue
Corte Madera, California 94925

Dear Mr. Anderson,

Thank you for the opportunity to comment on the Biodiversity, Fire, and Fuels Integrated Plan (BFFIP). Sustainable Fairfax is a nonprofit 501(c)(3) organization focused on education, outreach, and activism on issues of sustainability. We believe our society's practices and policies should support both present and future generations, as well as maintain and regenerate the health of the natural world.

We are thrilled that you are considering a no-pesticide plan and working for the health of our communities. We hope that you will balance the importance of decreasing toxins in our environment with the need to protect biodiversity in our local wild lands in perpetuity while also protecting our local communities from wildfire.

We are aware that integrated pest management strategies using a mix of manual and limited herbicide strategies have been effective on virtually eliminating invasive plant species in larger areas, including here in Marin as evidenced by the Coastal Conservancy's San Francisco Estuary Invasive Spartina Project. Glyphosate has also proven very effective on broom[1] but concern over toxicity has limited its use in our county. We are also aware of projects like Humboldt County's Friends of the Dunes, which has been able to abate invasive beach grass manually at a cost of $35k-40k per acre using a mix of paid and volunteer labor on an 113-acre property.

While we do much prefer the manual approach to removal, we would like assurances that the $11 million budget is sufficient to implement this method effectively on the scale of the MMWD lands, which encompass more than 20,000 acres. We understand that water rates were raised to cover the cost of watershed management and hope that increased rates will continue to be politically feasible in the future in order to support this important work. Success should be measured both in terms of habitat restoration and biodiversity enhancement as well and fuel load reduction. Any method that does not provide both runs the risk of further endangering and degrading native habitat and/or allowing the possibility of wildfire, which might not only endanger wildlife and habitat but human life and habitations, requiring the application of large amounts of airborne chemicals to quell these fires.

In addition, we are interested in the workforce aspects of this plan. Will the large amounts of manual labor required provide work with reasonable wages for local residents, and if so, how and where will they be housed? This project appears to have promising workforce development potential which could be beneficial to local communities.

Finally, we would like to know how the public will be educated and informed about the progress of this new approach. How will we know if this project is a success and where will the progress be reported? What are our alternatives if this approach does not work?

Again, thank you for the opportunity to comment on this new plan. Our hope is that it will further the ideals of sustainability we cherish in a) reducing toxins in the environment, b) enhancing biodiversity and protecting our local wildlands, c) promoting sustainable economies through living wage jobs, and d) public engagement in land stewardship.

Sincerely,

Sustainable Fairfax Board of Directors: Jennifer Hammond, Elizabeth Baker, Renee Goddard, Merrell Maschino, Boog Bookey, Jen Jones, Lisel Blash, Joelle Levy

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[1] See Young, S. 2003. Exploring Alternative Methods for Vegetation Control and Maintenance Along Roadsides, a report for the California Department of Transportation

Dain Anderson

From: Vivicka Parawell <vivicka1@me.com>
Sent: Friday, February 03, 2017 1:11 PM
To: Biodiversity, Fire and Fuels Integrated Plan EIR
Subject: I support the ban of toxic herbicides on Mt Tam watershed! :)

Please - thank you so much for proposing a ban on the use of toxic herbicides (or any other poisons) on my beautiful, wild, Mt. Tam.
I believe it is necessary and the day has come to face the reality that it isn't a "toolbox" against weeds, but against the wild living creatures, including me. :)

Thank you!

Sincerely,
Vivicka Parawell
(life-long marin resident)

prepared by: Aaron Gilliam
agcypress@gmail.com

Soil Health and Grazing in the BFFIP

- There are two things I'd like the MMWD to consider in the BFFIP, one of which is currently missing and the other not a tool that the current staff is familiar with. The first is **Soil health** and the second is a new, and at the same time very old, tool for land management, **shepherding**.

Modern land management framework

- Much of modern human activity has broken the ecological connectivity that keeps our upland soils healthy. We've exterminated key apex predators with wide spreading effects that cascade down the food chain; we've reduced salmonid habitat, thus breaking the cycle that delivers ocean nutrients back to the land from which it originally eroded; we've fenced in those who migrate and turned their migration corridors into deadly highway traps; we've extracted more biological resources than most ecosystems can sustain; and oddly enough, in our attempt to stop the destruction, and protect what we believe is left, on public land, we've also created the conditions for continued biological decay by limiting human interaction with the policy of "look-but-dont-touch." Just as the mountain lion keeps its prey populations in good health, humanity once played an active and beneficial role in our mediterranean ecology, and I believe we still can. In part, we still do, although to a much lesser and non-utilitarian way. In fact, the BFFIP is full of ways in which we actively participate with the land, however I believe it is missing a very key focus, **Soil Health**. The good thing is that folding soil health into this plan will have no negative effects on the rest of the plan, and, as I hope to illuminated, will help to achieve many of the goals already identified by the good work that you all have already completed.

- Before I get into the specific examples of how these two things, Healthy Soil and Shepherding, play into the BFFIP, I would like to first point out **the importance of healthy soil**:
    - The top layers of soil, those filled with microscopic and macroscopic life, moisture and nutrients, is the backbone of all terrestrial life. From it grows the majority of photosynthetic life, the plants, trees, grasses, alga that make up the base of the food chain. So it would stand that a healthy soil, one that is full of a diversity of life, in which nutrients are being unbound from the parent rock material for the use in the biotic world and which is building itself for continued diversity and abundance… it would stand that this soil would be more valuable for the condition of all life on earth, than sick or dead soil. Although it seems to be void from the current plan, I know this is already on everyone's radar as we wouldn't be here, revising the BFFIP from its predecessor, if it weren't for the sake of discontinuing biocides like Roundup from our land management toolkit. Biocides that kill the life in soil.

- But we can go a step further than simply doing less bad, stopping the death of healthy soils by eliminating the use of biocides. We can take our work to the level of building and regenerating our soils in hopes of leaving future generations with more abundant and diverse landscapes than we, or even our grandparents have known. The water and nutrient cycles, and in the long run atmospheric carbon cycles, are continually churning below our feet. They can however be broken and can limp forward without much gusto at the expense of all the above ground life that depend on the soil and it's processes for nutrients and water. As I mentioned our historical land use practices, first characterized by over utilization and later by lack of participation, have broken or at the least reduced the soil cycles and their role in maintaining an abundant and diverse flora and fauna. The explanation of each broken link and the ripple effect it's had would take too much time so I will focus on the solutions.

Shepherding as a tool for healthy land management:

- Building healthy soil is not something that we as humans actively participate in anymore, as we no longer close the nutrient cycle of the soil by returning our human fertilizer back to the soils from which we extracted our nutrients in the form of food. HOWEVER, we do still play a role in the management of the soil-building processes that are undertaken by the billions of soil microbes, invertebrates, fungi, plants and animals that, collectively, build healthy soil. We have a number of tools with which to manage the soil surface so as to create the conditions in which all the other players in the system can do their best at building healthy soil. <u>We are not building soil, we are creating the conditions under which healthy soil is built</u>. Even adding **compost** to the soil is not building soil. It is simply taking nutrients from one location and depositing them elsewhere. It is in effect, adding soil, not building soil. It does however affect the system in a way that helps the soil begin to rebuild itself and is therefore a good tool, to help the soil in its rebuilding process, and should be considered for use in the BFFIP.
- So how is shepherding a tool for doing this? I define shepherding as **the complete set of management strategies employed by a human to take care of both the animals they are directly responsible for and the land that sustains them, in a way that does not reduce future generations ability to do the same**. A shepherd reads the land, listens to his/her flock and moves the animals across the land in a way that both meets the animals' needs and leaves the land in a position to grow back better than he/she found it. A sheep farmer, on the other hand, has an equation that should, but often does not, take into account the overall health of the land. Sheep farmers are often dependent on animal feed brought in from other land that they have no participation in maintaining, and due to the global competitive nature of the current farming industry, are often pushed to extract more than the land can sustain to make the

equation of meat and fiber sales end up in their immediate favor. We have all seen how this can lead to serious land degradation. I am often met by the disgust of people who think I am merely a sheep farmer, and do not understand that my practice is far different. That I am, in fact, playing an active role in rebuilding the soil that is the foundation of the land that they are so intent on saving. I however, will not be satisfied by leaving the land as I found it. I will only be satisfied if my work as a shepherd leaves the land better than I found it.

- I cannot describe all the considerations that go into my daily decisions on how and where to move my herd. However I can describe the fundamental principles that guide me and allow me to use the impact of the grazing animals, be they sheep, goats, cattle, or horses, to build healthy soil. Once again, my focus in building healthy soil is creating the **soil surface conditions** under which the milliad of soil-building organisms can work most efficiently to do their work.
    - 1. In the “green season” when the plants are actively photosynthesizing, their addition of organic compounds to the soil via their living root system is the most powerful soil-building mechanism. Plants don’t just extract nutrients from the soil with their roots, they actively pump carbon based compounds into the soil feeding the growth of the soil. When they die, they lend their entire mass to the soil food web to continue growing the soil. Therefore when I graze living plants, I do so at the most opportune time to keep that soil building mechanism functioning at an optimal rate. Plants, specifically grassland species, that have co-evolved with grazing herds of animals, have an S-shaped growing curve. At first when they have just a small solar panel (their first leaves) with which to capture solar energy, they grow very slowly. Consequently they are slow to feed the soil through their roots. As they build more solar panels they are able to grow more rapidly and do so on in an exponential growth curve. However at a certain point they begin to taper off and the growth curve flattens out. It is at this point that we aim to graze living plants. If we only graze them lightly, (skim the cream off of the top), they are reset to the part of their grown curve where they are again, rapidly growing, converting large amounts of sunlight into organic matter above and below ground. As I mentioned this is a simplified description, but the argument holds that grassland plants have co-evolved with grazing animals to be more productive for the whole system when living in a healthy balance with these animals than when the grazing animals are absent. Yes we do have deer on our public lands, but we no longer have large herds of grazing animals nor do we have their predators. This is a very significant part of the story. In small groups, and when not threatened by large predators, grazing animals behave very differently. They do not migrate, they spread out, they tend to eat more than they trample, (trampling of grassland species, followed by adequate rest both helps build soil and allows for the expression of a greater diversity of plant life) and they begin regrazing

their favorite plants before the plants have gotten to fully recover. Over time this kills off the preferred plant species leaving space for invasives to fill in while at the same time allowing for the less desirable plants to overpopulate.

- A major part of shepherding management is to keep the flocks in a large, dense herd so they trample more than they eat and do so in an even manner. Then we make sure the animals do not return to the same spot until all the plants have fully recovered. In doing so we are mimicking how historic larger herds of migrating species and their predators would have impacted the grasslands.
- Good shepherd are also able to move their herds in a manner that distributes soil/plant nutrients from areas of great abundance to soils/areas lacking nutrients. This is called “pumping” and can only be achieved by flock/herd managers that are in continuous management contact with their animals.
- 2. In the “brown season” when plants we are grazing are mostly dead or dormant, our focus changes, and we become obsessed with preparing the soil surface to be protected from the elements and ready to absorb the most amount of precipitation that falls in the coming rain season. As most land stewards know, it is not the amount of rain that falls that makes or breaks the growth cycles in a system, is is the amount of water that we are able to absorb and store for use. If 48 inches of water fall on average in our county in one year, but only 4 inches are captured and stored in the soil, leaving the other 44 inches running off to the ocean, mostly in flood events, then it is really only 4 inches of effective moisture that we received that year. If we get only 6 inches of rain in a bad drought year, but are able to store 5 inches in a healthy, protected, porous soil, then we are effectively in a better position for growth than in the average year. In short, the dormant season is our chance as shepherds to create the soil surface conditions that will allow for the soil microbes to stay alive (moist and cool), the soil to stay in place (protected from wind and rain), and to keep the soil from being overly exposed to the powerful rays of the sun. HOWEVER, and this is a big one, we don’t want to do any of this if it is at the expense of the future growth of the plants from the soil. If all the dead plant material is left standing, it may provide some of the conditions that I just mentioned, but it will cease to be a part of the soil nutrient cycle. If the dead plant material is left standing, then it will oxidize and return to the atmosphere without feeding the soil biom. Also, the shade of standing dead litter left as a canopy high above the soil is different than the protection of dead litter brought in contact with the soil, in my case, by the hooves of the sheep. Standing shade creates a reduction of growth in the following years whereas shade that comes from plant litter that has been trampled into the soil provides all the conditions for soil growth and allows

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for copious growth after the rains have returned. It also does a better job at holding moisture in the soil so the plants can enjoy a longer growing season, further past the end of the rains than plants without such soil surface conditions.

- Shepherds keep their flocks/herds together, moving all the time, whereas most ranchers in california allow their livestock to spread out and roam freely. When the animals are herded together and kept on the move they end up trampling more material than they eat, creating the essential soil surface environment for soil building. Historically the existence of both large herds of grazing animals (elk, pronghorn antelopes, deer) and plentiful predator species (grizzly bears, mountain lions, jaguars) played the role of sheep flocks and shepherds. Now both the large herds and their predators are gone, but we have the potential to provide both in the form of livestock and shepherds thus reconnecting the cycles of plant, animal and predator, and begin rebuilding the soils that have been overgrazed with poor management or left to degrade under lack of plant/animal/predator impact.

Connection to the BFFIP

Below is a list of the main goals set forth by the BFFIP that are addressed by building healthy soil with the tool of Shepherding

- **Watershed resilience** -
    - Healthy soil, with a protected soil surface does not break apart and run off when the rain pounds down on it, filling in the salmon spawning grounds and estuaries; a healthy protected soil does not blow away when the wind whips above it; it does not desiccate and cease to grow new life when the sun beats down upon it. The healthier the soil the more rain it absorbs, the healthier the soil, the more dirty water it can filter and clean, the healthier the soil, the deeper the roots reach and the further the water is able to penetrate into earth, recharging our creeks, stream, ponds and reservoirs.

    - Supporting the health of a diversity of **deeply rooted, perennial pasture plants**. A good shepherd will read the land, observe the plants and as instead of only seeing forage for their flock, they will see the message that the plants are sending them. Either, “we are still rebuilding from the last stressful event (flood, drought, fire, grazing, etc)” or “we are mature, our back-up stores of energy are filled, and we can offer you part of our abundance.” In doing so we can support plants that are better at building soil than others.
    -
- **Fire management** - why settle for a narrow fire buffer strip when you can manage the entire landscape to be more fire retardant while at the same time providing food and fiber for the community.

- **Usability** - the watershed is used by the public for all sorts of recreational activities (bird watching, biking, hiking, running, fishing, dog walking, etc). This tool can be useful in reducing the continuous tick habitat that harbors Lymes disease. By knocking down the tall standing grass that ticks are dependent on we can break their cycles and over time reduce their numbers.
- Have you ever seen a family come upon a group of well managed sheep, their shepherd and a sheep dog on a hike through the woods? It's a wonderful experience that most will never forget.
- **Ecological health and diversity** - at a fraction of the cost associated with current restoration practices we can build the soil that builds that diversity of our grasslands and savannas, the foundation of abundance in mediterranean climates.
- Our management of the sheep can take into consideration the multitude of life cycles of sensitive species with whom we share the landscape (ground nesting birds, mating frogs, migrating land salamanders), and work to support their habitat without impeding on their space during critical times of the year. As always building the healthy soil that breeds the plant base that is the base of the food chain for all of these organisms the main way to support the diversity of an ecosystem.
- **Invasive species management -**
    - Unfortunately there is no cheap, fast, non toxic solution to this issue. It is a long time in the making and will take some time before we are able to get things back in balance. Grazing animals can be utilized to impact some of these invasive plant species when they are most vulnerable, however we would still only be addressing a symptom and not the root cause of our problem.
    - Dead and imbalanced soils harbor monocultures of both native and non native invasive species. Some of these invasives, native or not, are truly just doing their job at occupying disturbed, deficient, or imbalanced soils. They are symptoms of a larger issue, unhealthy soil. We can attempt to extract the ones we do not like, even if they are only trying to heal the situation, only to watch some new undesirable species fill the void. Or we can attempt to get at the root of the problem. Build healthy soil.

- **Carbon and Climate change** - Although forest draw down and store a significant amount of carbon in their above-ground biomass, healthy grassland soils, with the majority of biomass below ground, have the ability to store carbon in a way that will not be undone when the next wildfire burns through.

<u>Wrap up</u>:

- There are more tools than Shepherding in our tool kit for healthy land stewardship, but none of them stack functionality nearly as well as this one tool, and none provide food and fiber for the community of people who are living in the place of stewardship.

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- Unfortunately the operational costs associated with shepherding with the focus of soil and ecological health exceed the income generated from sales of lamb meat and wool. The benefits of managing animals on the land this way (increased water, ecological diversity and abundance, fire management, etc) are enjoyed by the public and it would make sense that the public should play a role in funding these efforts. If funds were available, I can guarantee, from my 11 years of experience in the realms of land stewardship and agriculture, that we would have sheep farmers and cattle farmers changing into Shepherds and land stewards once again.
- Thank you for taking the time to read this. Any and all comments or questions are welcome and can be directed to me via email or appointment. There is research out there to back up everything that I have spoken of and there are people like myself that are actively pursuing healthy land management with the use of sheep, goats and cattle. I would be happy to put you in touch with the resources and people.

Aaron Gillian

Dain Anderson

From: Paul Minault <pminault@earthlink.net>
Sent: Monday, February 06, 2017 2:45 PM
To: Biodiversity, Fire and Fuels Integrated Plan EIR
Subject: One more scoping thought for the BFFIP

Hello Dain,

One more scoping thought on the BFFIP to add: I think the baseline conditions statement should include information on the total length of the watershed boundary, and the portion of that length that is invaded, with an indication whether it is clear or likely that the invasive plants originated from the property immediately on the other side of the boundary and, if possible, whether the invasives on the other side are under current (or projected, in the case of public agencies) management or not.

Thanks, Paul Minault

Dain Anderson

From: Ann Shih <annshih8@gmail.com>
Sent: Wednesday, February 08, 2017 2:41 PM
To: Biodiversity, Fire and Fuels Integrated Plan EIR
Subject: Public comment

Dear Sir,

Please, keep glyphosphates (Round up) out of our water supply by keeping them out of the arsenal of methods to control vegetation. The verdict on its effects in humans are inconclusive but are concerning enough in small mammals and other animals to ban their use, certainly, near our water supply. The risk is not worth the ends for which they are being considered to be put to use. Thank you for your service.

--Ann Shih
Sent from my iPhone

--Ann Shih
Sent from my iPhone

--Ann Shih
Sent from my iPhone

Dain Anderson

From: Suzuki C <suzukicady@gmail.com>
Sent: Wednesday, February 15, 2017 9:46 PM
To: Biodiversity, Fire and Fuels Integrated Plan EIR
Subject: Ban on Glyphosate and other toxic herbicides

Hello,

I'm writing to express my heartfelt support for the County plan to manage vegetation in the Mount Tam watershed which includes no toxic herbicides or any other poisons.

Thank you!

Suzuki Cady

CAL-IPC
CALIFORNIA INVASIVE PLANT COUNCIL

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February 16, 2017

Dain Anderson, Environmental Services Coordinator
Marin Municipal Water District
220 Nellen Avenue
Corte Madera, California 9492

Dear Mr. Anderson,

I am writing on behalf of the California Invasive Plant Council to comment on the proposed scope for the EIR for the Biodiversity, Fire and Fuels Integrated Plan (BFFIP).

The scope as proposed explicitly sets aside consideration of using herbicides in managing invasive plants. Yet chemical approaches are an important part of the Integrated Pest Management (IPM) toolbox. Therefore we encourage MMWD to include in its environmental analysis an alternative that uses herbicides. This would allow a science-based assessment of the relative impacts of all management approaches.

Thank you for your consideration.

Sincerely,

Doug Johnson, Executive Director
dwjohnson@cal-ipc.org

The California Invasive Plant Council is a 25-year-old nonprofit organization dedicated to protecting California's environment and economy from invasive plants. Our statewide membership comprises professional land managers, university researchers, and restoration volunteers, all committed to stewarding the state's biodiversity and natural resources.