

PROPERTY TRANSFER AGREEMENT

This Property Transfer Agreement (this "Agreement") is entered into as of this 15th day of June, 2017 by and between McKesson Corporation, a Delaware corporation ("Owner") and the County of San Mateo, a political subdivision of the State of California (the "County").

RECITALS

A. Owner is the owner of certain real property (the "Property") located in the State of California, County of San Mateo, more particularly described in Exhibit A, attached and made a part hereto, consisting of three parcels (each, a "Parcel").

B. Owner desires to grant the Property to the County, and the County desires to accept from Owner the Property. Further, Owner has agreed to donate to the County \$549,000 in funds for implementation of the Restoration and Invasives Management Plan (as defined below) and funds for management of the same.

C. Prior to acceptance of the Property, the County shall have the right to review and approve, in its sole and absolute discretion, all aspects of the Property, including, but not limited to, the physical and environmental condition of the Property and the desirability of the Property for the County's intended use and purpose.

D. The County is authorized to accept the Property in accordance with the terms of this Agreement.

AGREEMENT

In consideration of the foregoing Recitals and for other good and valuable consideration, the parties agree as follows:

1. Escrow. The transaction contemplated by this Agreement shall be made through an escrow (the "Escrow") established by the parties at Fidelity National Title Insurance Company ("Title Company"), 100 Pine Street, Suite 2460, San Francisco, California 94111, Attention: Linda Rae Paul, Telephone: (415) 659-1849, e-mail: lpaul@fnf.com.
2. Transfer. This transaction represents a grant of real property to the County. Owner agrees to transfer to the County fee title to the Property by a grant deed (the "Grant Deed") substantially in the form of Exhibit B attached hereto and made a part hereof, subject to terms and conditions hereof.
3. Phase 1 Environmental Site Assessments. Prior to Close of Escrow (as defined below) Owner shall obtain and deliver to the County a Phase 1 Environmental Site Assessment for each of the Parcels.
4. Discharge of Monetary Liens. As a condition to Close of Escrow Owner agrees to discharge, satisfy or release the lien of any deed of trust, any mechanic's lien, any tax lien (other than for taxes which are not yet delinquent) or any other monetary lien.
5. Deposits Into Escrow. Owner shall deposit into escrow the total sum of Five Hundred and Forty Nine Thousand Dollars, as follows: (a) the sum of Four Hundred Ninety-Nine Thousand Dollars (\$499,000) to be distributed to the County at Close of Escrow (as defined in Section 6 below) for implementation of the Restoration and Invasives Management Plan, dated October 15, 2016 prepared by West Coast Wildlands and Creekside Science

(the "Restoration and Invasives Management Plan"), attached hereto as Exhibit C in connection with the grant of the Property in accordance with the San Bruno Mountain Habitat Conservation Plan, (b) the sum of Fifty Thousand Dollars (\$50,000.00) to reimburse the County for the costs of managing the Restoration and Invasives Management Plan, and (c) the Grant Deed duly executed by Owner. Owner advises the County, and the County hereby acknowledges, that the fees of West Coast Wildlands, Inc. and Creekside Science for preparation of the Restoration and Invasives Management Plan are included in the sum of Four Hundred Ninety-Nine Thousand Dollars (\$499,000.00) referenced above.

6. Title Policy. At the date of conveyance of the Property to the County and the closing of this transaction (the "Close of Escrow") Owner shall cause Title Company, at Owner's expense, to commit to issue an Owner's CLTA Policy of Title Insurance (the "Title Policy") in the amount of Fifty Thousand Dollars (\$50,000.00) to the County, showing title vested in the County without any exceptions for unpaid monetary liens. Owner shall pay the cost of the premium for the Title Policy, including the cost of additional premiums for an ALTA Policy of Title Insurance or for any endorsements requested by the County.

7. Real Property Taxes. Real property taxes prorated through the date of Close of Escrow shall be paid by Owner.

8. Escrow and Recording Fees. Owner shall pay all Escrow and recording fees (if applicable).

9. Owners's Conditions Precedent. Owner's obligation to perform under this Agreement and the Close of the Escrow shall be subject to and contingent upon satisfaction of each of the following conditions precedent prior to the close of escrow:

a. The timely deposit by the County with Title Company of all documents and funds required to be deposited by the County under this Agreement.

b. Performance by the County of all obligations, covenants and agreements on the County's part to be performed under this Agreement within the time provided in this Agreement for such performance.

10. County's Conditions Precedent. The County's obligation to perform under this Agreement and the Close of Escrow shall be subject to and contingent upon satisfaction of each of the following conditions precedent prior to the Close of Escrow:

a. The timely deposit by Owner with Title Company of all documents and funds required to be deposited by Owner under this Agreement.

b. Performance by Owner of all obligations, covenants and agreements on Owner's part to be performed under this Agreement within the time provided in this Agreement for such performance.

c. All requisite corporate action has been taken by the County in connection with the entering into this Agreement and the consummation of the transaction contemplated hereby.

11. Owner's Representations and Warranties. The following constitute representations and warranties of Owner to the County:

a. Owner has full right, power and legal authority to enter into this Agreement, to transfer and convey the Property to the County, and to carry out Owner's obligations hereunder.

b. The individual executing this Agreement and the instruments referenced herein on behalf of Owner has the legal power, right and authority to bind Owner to the terms hereof and thereof.

- c. All requisite corporate action has been taken by Owner in connection with the entering into this Agreement and the consummation of the transaction contemplated hereby.
- d. Neither the execution and delivery of this Agreement and documents referenced herein, nor the consummation of the transactions herein contemplated, conflict with or result in the material breach of any terms or conditions any agreement to which Owner is a party
- e. Owner has not received written notice from any governmental agency notifying owner of any violations of law, ordinance, rule, or regulation relating to the Property.
- f. No representation or warranty of Owner in this Agreement contains or will contain any untrue statement of a material fact or will omit a material fact.
- g. Owner's representations and warranties made in this Agreement shall be true and correct as of the date of the Close of Escrow with the same force and effect as if remade by Owner in a separate certificate at that time.

12. County's Representations and Warranties. The following constitute representations and warranties of the County to Owner:

- a. The County has the legal power, right and authority to enter into this Agreement and to consummate the transaction contemplated hereby.
- b. The individuals executing this Agreement on behalf of the County have the legal power, right, and authority to bind the County to the terms and conditions hereof.
- c. This Agreement has been duly authorized, executed and delivered by the County.
- d. No representation or warranty of the County in this Agreement contains or will contain any untrue statement of a material fact or will omit a material fact.
- e. The County's representations and warranties made in this Agreement shall be true and correct as of the date of the Close of Escrow with the same force and effect as if remade by the County in a separate certificate at that time.

13. Access to the Property. The County shall be provided with access to the Property and be entitled to undertake, at the County's sole expense, an inspection of the Property and a review of the physical condition of the Property at any reasonable time prior to Close of Escrow.

14. Indemnification. Owner agrees to indemnify, protect, defend, and hold harmless the County and its officers, employees and agents, from and against any and all claims, demands, damages, losses, liabilities, obligations, penalties, fines, actions, cause of action, judgments, suits, proceedings, costs and expenses (including, without limitation, attorneys' fees, court costs, administrative procedural costs, and experts' fees) of any kind or nature whatsoever which may at any time be incurred by or asserted against the County relating to or arising from the use of the Property prior to Close of Escrow by Owner; provided, however, that the foregoing indemnification shall not apply to any actions or omissions by or any negligence of any grantee under any easement or other agreement designated in Exceptions 5 through 13 of that certain Preliminary Title Report Number 013-23079389-SL0, dated February 29, 2016, issued by Fidelity National Title Insurance Company, a copy of which has been provided to the County. This indemnity by Owner herein contained shall survive the transfer of title to the County for a period of two (2) years.

15. Notices. Any notice or other communication pursuant to this Agreement shall be in writing and shall be deemed to be properly given if delivered, mailed or sent by United States Postal Service, certified mail, postage prepaid, or nationally-recognized overnight courier service to the following persons:

If to Owner: McKesson Corporation
One Post Street, 34th Floor
San Francisco, CA 94104
Attention: McKesson Real Estate

with a copy to: Hollander Law Offices
81 Wilson Way
Larkspur, CA 94939
Attention: James R. Hollander

If to the County: County of San Mateo
Real Property Division
555 County Center, 4th Floor
Redwood City, CA 94063

16. Time of Essence. Time is of the essence of this Agreement and each and every provision hereof.

17. Waiver. The waiver by any party to this Agreement of a breach of any provision of this Agreement shall not be deemed a continuing waiver or a waiver of any subsequent breach of that or any provision of this Agreement.

18. Entire Agreement. This Agreement shall constitute the entire understanding and agreement of the parties hereto regarding the donation of the Property to the County, and all prior agreements, understandings, representations or negotiations are hereby superseded, terminated and canceled in their entirety, and are of no further force or effect.

19. Amendments. This Agreement may not be modified or amended except in writing by the parties.

20. Applicable Law. The parties hereto expressly agree that this Agreement shall in all respects be governed by the laws of the State of California.

21. Severability. Wherever there is any conflict between any provision contained herein and any law, ordinance or regulation, the latter shall prevail, but the affected provisions of this Agreement shall be limited only to the extent necessary to bring them within the requirements of such law.

22. Counterparts. This Agreement may be executed in separate counterparts, each of which when so executed shall be deemed to be an original. Such counterparts shall, together, constitute and be one and the same instrument.

23. Captions. The captions appearing at the commencement of the paragraphs, subparagraphs and sections hereof are descriptive only and for convenience in reference. Should there be any conflict between any such caption and the article, paragraph or subparagraph at the head of which it appears the article, paragraph or subparagraph and not the caption shall control and govern the construction of this Agreement.

24. Further Action. Each party hereto shall, before the Close of Escrow, duly execute and deliver such papers, documents and instruments and perform all acts reasonably necessary or proper to carry out and effectuate the terms of this Agreement.

25. Exhibits. The following Exhibits are attached to this Agreement and incorporated by reference herein.

- Exhibit A: Property Description
- Exhibit B: Deed with attached Certificate of Acceptance
- Exhibit C: Restoration and Invasives Management Plan

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first above written

OWNER:

McKesson Corporation,
a Delaware corporation

By: 

Print Name: Brian P. Moore

Title: Senior Vice President & Treasurer

COUNTY:

County of San Mateo,
a political subdivision of the State of California

By: _____

Print Name: _____

Title: _____

EXHIBIT A

LEGAL DESCRIPTION OF PROPERTY

Real property in the Unincorporated Area, County of SAN MATEO, State of CALIFORNIA, described as follows:

PARCEL ONE:

PARCEL 1-08-01:

BEGINNING AT THE POINT OF INTERSECTION OF THE SOUTHERLY BOUNDARY LINE OF GUADALUPE CANYON PARKWAY (100 FEET WIDE) AS ESTABLISHED BY THAT CERTAIN GRANT OF EASEMENT FROM CROCKER LAND COMPANY TO THE COUNTY OF SAN MATEO RECORDED DECEMBER 8, 1966 IN BOOK 5246 OF OFFICIAL RECORDS AT PAGE 566 (DOCUMENT NO. 14331-AA) WITH THE WESTERLY BOUNDARY LINE OF PARCEL 1 AS SHOWN ON THAT CERTAIN PARCEL MAP RECORDED MAY 28, 1975 IN BOOK 28 OF PARCEL MAPS AT PAGES 12 AND 13; THENCE FROM SAID POINT OF BEGINNING ALONG SAID WESTERLY BOUNDARY LINE, SOUTH 24° 28' 04" WEST 608.49 FEET AND SOUTH 22° 35' 04" WEST 1473.24 FEET TO THE NORTHERLY BOUNDARY LINE OF "TRACT NO. 852, CROCKER INDUSTRIAL PARK UNIT NO. 3", RECORDED DECEMBER 27, 1968 IN BOOK 68 OF MAPS AT PAGE 32, 33, 34 AND 35; THENCE ALONG SAID NORTHERLY BOUNDARY, NORTH 79° 40' 00" WEST 289.80 FEET; THENCE WESTERLY ON THE ARC OF A CURVE TO THE RIGHT, HAVING A RADIUS OF 394 FEET, A CENTRAL ANGLE OF 12° 18' 57", AN ARC LENGTH OF 63.20 FEET; THENCE NORTH 67° 21' 03" WEST 345.97 FEET TO THE NORTHWESTERLY CORNER OF SAID TRACT NO. 852; THENCE LEAVING SAID NORTHERLY LINE, NORTH 46° 21' 03" WEST 250 FEET MORE OR LESS TO THE EASTERLY LINE OF LANDS CONVEYED FROM CROCKER LAND COMPANY TO THE COUNTY OF SAN MATEO BY GRANT DEED DATED APRIL 26, 1978 AND RECORDED MAY 3, 1978 IN BOOK 7740 OF OFFICIAL RECORDS AT PAGE 1093 (62052-AM); THENCE ALONG SAID LAST MENTIONED LINE NORTH 22° 38' 57" EAST 550 FEET MORE OR LESS TO SAID SOUTHERLY LINE OF GUADALUPE CANYON PARKWAY (100 FEET WIDE); THENCE ALONG SAID LAST MENTIONED LINE, EASTERLY ON THE ARC OF A CURVE TO THE LEFT, HAVING A RADIUS OF 650 FEET, AN ARC DISTANCE OF 915.69 FEET; THENCE NORTH 31° 56' EAST 679.64 FEET; THENCE NORTHEASTERLY ON THE ARC OF A CURVE TO THE RIGHT, HAVING A RADIUS OF 550 FEET, A CENTRAL ANGLE 34° 34' 10", AN ARC DISTANCE OF 331.84 FEET TO THE POINT OF BEGINNING.

EXCEPTING THEREFROM THAT CERTAIN PARCEL CONTAINING 0.335 ACRES DESCRIBED AS PARCEL 1 IN THAT CERTAIN DEED FROM CROCKER LAND COMPANY TO THE GUADALUPE VALLEY MUNICIPAL IMPROVEMENT DISTRICT DATED JUNE 26, 1969 AND RECORDED AUGUST 26, 1969 IN BOOK 5681 OF OFFICIAL RECORDS AT PAGE 619 (60987-AC).

PARCEL TWO:

PARCEL 1-08-02:

BEGINNING AT THE NORTHWESTERLY CORNER OF THAT CERTAIN SUBDIVISION ENTITLED "TRACT NO. 852, CROCKER INDUSTRIAL PARK UNIT NO. 3", RECORDED DECEMBER 27, 1968 IN

BOOK 68 OF MAPS AT PAGES 32, 33, 34 AND 35; THENCE SOUTHERLY AND SOUTHEASTERLY THE FOLLOWING COURSES AND DISTANCES ALONG THE WESTERLY AND SOUTHWESTERLY BOUNDARY OF SAID TRACT NO. 852; SOUTH 21° 38' 58" WEST 350 FEET; THENCE SOUTHERLY ON THE ARC OF A CURVE TO THE LEFT, HAVING A RADIUS OF 158 FEET, A CENTRAL ANGLE OF 89° 00' 00", AN ARC DISTANCE 245.43 FEET; THENCE SOUTH 67° 21' 03" EAST 135.50 FEET; THENCE SOUTHEASTERLY ON THE ARC OF A CURVE TO THE RIGHT HAVING A RADIUS OF 767.61 FEET, A CENTRAL ANGLE OF 12° 21' 03", AN ARC DISTANCE OF 165.47 FEET; THENCE SOUTH 55° 00' 00" EAST 600 FEET; THENCE SOUTHEASTERLY ON THE ARC OF A CURVE TO THE RIGHT, HAVING A RADIUS OF 967.45, A CENTRAL ANGLE OF 20° 40' 00", AN ARC DISTANCE OF 348.96 FEET; THENCE SOUTH 34° 20' 00" EAST 50 FEET; THENCE SOUTHEASTERLY ON THE ARC OF A CURVE TO THE LEFT, HAVING A RADIUS OF 831.61 FEET, A CENTRAL ANGLE OF 16° 57' 30", AN ARC DISTANCE OF 246.14 FEET TO A POINT OF COMPOUND CURVATURE, THENCE CONTINUING SOUTHEASTERLY ON A COMPOUND CURVE TO THE LEFT, HAVING A RADIUS OF 1,031.45 FEET, A CENTRAL ANGLE OF 19° 28' 38", AN ARC DISTANCE OF 350.63 FEET; THENCE SOUTH 70° 46' 08" EAST 94.69 FEET; THENCE SOUTHEASTERLY ON A CURVE TO THE RIGHT, HAVING A RADIUS OF 415.97 FEET, A CENTRAL ANGLE OF 42° 24' 33", AN ARC DISTANCE OF 307.89 FEET; THENCE SOUTH 28° 21' 35" EAST 41.36 FEET TO THE MOST NORTHERLY CORNER OF PARCEL A AS SHOWN ON THAT CERTAIN PARCEL MAP RECORDED AUGUST 12, 1976 IN BOOK 33 OF PARCEL MAPS AT PAGES 3, 4 AND 5; THENCE ALONG THE NORTHWESTERLY BOUNDARY OF SAID PARCEL A, SOUTH 48° 28' 09" WEST 635.51 FEET TO INTERSECTION THEREOF WITH THE NORTHEASTERLY BOUNDARY LINE OF LANDS CONVEYED FROM CROCKER LAND COMPANY TO THE COUNTY OF SAN MATEO BY GRANT DEED DATED APRIL 26, 1978 AND RECORDED MAY 3, 1978 IN BOOK 7740 OF OFFICIAL RECORDS AT PAGE 1093 (62052-AM); THENCE ALONG SAID LAST MENTIONED BOUNDARY, NORTH 44° 40' 29" WEST 1691.16 FEET; THENCE NORTH 30° 06' 18" WEST 935.15 FEET; THENCE NORTH 22° 38' 57" EAST 510 FEET MORE OR LESS TO A POINT WHICH BEARS NORTH 46° 21' 03" WEST FROM THE POINT OF BEGINNING OF THE DESCRIPTION; THENCE LEAVING SAID LAST MENTIONED BOUNDARY, SOUTH 46° 21' 03" EAST 250 FEET MORE OR LESS TO THE POINT OF BEGINNING.

PARCEL THREE:

BEGINNING AT THE INTERSECTION OF THE CORPORATE LIMITS OF DALY CITY WITH THE NORTHERLY LINE OF GUADALUPE CANYON PARKWAY, SAID POINT BEING THE SOUTHEASTERLY CORNER OF THAT TERRITORY ANNEXED TO DALY CITY JUNE 27, 1994 BY RESOLUTION NO. 94-169; SAID POINT ALSO SHOWING ON RECORD OF SURVEY MAP FILED NOVEMBER 17, 1982 IN VOLUME 9, L.L.S. MAPS OF SAN MATEO COUNTY, PAGES 30 AND 31; THENCE ALONG SAID DALY CITY CORPORATE LIMITS NORTH 19° 36' 36" EAST 69.32 FEET TO AN ANGLE POINT IN THE CORPORATE LIMITS OF BRISBANE AS DESCRIBED IN ANNEXATION THERETO MARCH 18, 1963 BY ORDINANCE NO. 45; THENCE ALONG SAID BRISBANE CORPORATE LIMITS SOUTH 59° 15' 24" EAST (CALLED SOUTH 60° 22' EAST IN SAID ORDINANCE NO. 45) 127.38 FEET TO SAID NORTHERLY LINE OF GUADALUPE CANYON PARKWAY (AS SHOWN ON SAID L.L.S. 9/30-31); THENCE LEAVING SAID BRISBANE CORPORATE LIMITS AND ALONG SAID LINE OF GUADALUPE CANYON PARKWAY SOUTH 87° 53' 41" WEST 28.80 FEET AND ON THE ARC OF A TANGENT CURVE TO THE RIGHT, HAVING A RADIUS OF 1,150.11 FEET, A CENTRAL ANGLE OF 5° 10' 52", AN ARC LENGTH OF 104.00 FEET TO THE POINT OF BEGINNING.

APN: 005-260-370, 005-260-180, 090-090-250, 005-260-380, 005-270-100, 090-100-250 and 005-260-360

EXHIBIT B

FORM OF GRANT DEED

WHEN RECORDED MAIL TO

County of San Mateo
Real Property Division
555 County Center, 4th Floor
Redwood City, Ca 94063

OFFICIAL COUNTY BUSINESS – EXEMPT FROM RECORDING FEES PURSUANT TO GOV'T. CODE
§27383 AND DOUMENTARY TRANSFER TAX PURSUANT TO REVENUE AND TAXATION CODE
SECTION 11922

Grant Deed	
APNS: 005-260;370-1, 005-260-180-4, 090-090-250-3, 005-260-380-0, 005-270-100-0, 090-100-250-1 and 005-260-360-2, County of San Mateo	

McKESSON CORPORATION, a Delaware corporation,

hereby GRANTS to THE COUNTY OF SAN MATEO, a political subdivision of the State of California, the following described real property situated in the State of California, County of San Mateo, described as follows:

See Exhibit "A"
consisting of 1 page attached hereto
and by this reference made a part hereof.

Dated: _____, 2016

GRANTOR:

McKESSON CORPORATION,
a Delaware corporation

By: _____
Print Name _____
Its: _____

STATE OF CALIFORNIA)
) ss:
COUNTY OF SAN FRANCISCO)

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

On this ____ day of _____, 2017, before me, _____ a Notary Public, personally appeared _____, who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

[SEAL]

NOTARY PUBLIC
State of California
My commission expires _____

EXHIBIT "A"

Legal Description

Real property in the Unincorporated Area, County of SAN MATEO, State of CALIFORNIA, described as follows:

PARCEL ONE:

PARCEL 1-08-01:

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PARCEL TWO:

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PARCEL THREE:

BEGINNING AT THE INTERSECTION OF THE CORPORATE LIMITS OF DALY CITY WITH THE NORTHERLY LINE OF GUADALUPE CANYON PARKWAY, SAID POINT BEING THE SOUTHEASTERLY CORNER OF THAT TERRITORY ANNEXED TO DALY CITY JUNE 27, 1994 BY RESOLUTION NO. 94-169; SAID POINT ALSO SHOWING ON RECORD OF SURVEY MAP FILED NOVEMBER 17, 1982 IN VOLUME 9, L.L.S. MAPS OF SAN MATEO COUNTY, PAGES 30 AND 31; THENCE ALONG SAID DALY CITY CORPORATE LIMITS NORTH 19° 36' 36" EAST 69.32 FEET TO

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APN: 005-260-370, 005-260-180, 090-090-250, 005-260-380, 005-270-100, 090-100-250 and 005-260-360

EXHIBIT C

Restoration and Invasives Management Plan for the Dedication of McKesson Properties Parcels One, Two, and Three to the San Bruno Mountain Habitat Conservation Plan



Report prepared for the San Mateo County Parks Department
October 15, 2016

Restoration and Invasives Management Plan for the Dedication of McKesson Properties Parcels One, Two, and Three to the San Bruno Mountain Habitat Conservation Plan

Prepared for:

McKesson Properties

San Francisco, California

Prepared by:

Mike Forbert

West Coast Wildlands, Inc.

PO Box 1057

Pacifica, California 94044

&

Lech Naumovich

Creekside Science

27 Bishop Lane

Menlo Park, CA 94025

October 15, 2016

Cover photo: 2015 photograph of Parcel 1 looking towards Dairy ravine onto an area well suited for restoration to lupine scrub.

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I. Introduction

A. Purpose

McKesson Properties has proposed the dedication of three parcels located on San Bruno Mountain to the San Mateo County Parks Department (Figure 1). This document provides a roadmap to the restoration and maintenance of the parcels to be in a “condition of minimal maintenance”, as required by the San Bruno Mountain Habitat Conservation Plan (SBMHCP), allowing its legal transfer to the County of San Mateo Parks Department. Once funding from McKesson Corporation is accepted by the County of San Mateo, the County is expected to take possession of described properties and will be responsible for execution of this project.

The 2007 San Bruno Mountain Habitat Management Plan (SBMHMP), Exhibit E, lists 61 high-priority invasive plant species within the SBMHCP area. This plan’s target weed species are based on the weed management priorities of the SBMHMP, and the weed species present within the project site. The approach is to control target weeds within the project boundary through efficient use of mechanical and chemical management and restore the disturbed areas to native plant species.

The purpose of this Restoration and Invasive Management Plan (RIMP) is to bring the parcels into a “condition of minimal maintenance”. The key aspects of meeting this condition are:

- control the spread of undesired plants
- eradication of target low density invasive plants
- reduction of scrub species from historic grassland habitat allowing for the restoration of habitat for covered species and species of concern as named in the SBMHCP

The proposed scope of work covers from 2016 through 2021.



FIGURE 1: OVERVIEW MAP OF THREE MCKESSON PROPERTIES TO BE DEDICATED. PROJECT DOES NOT INCLUDE PARCELS 4 AND 5.

B. Site location and setting

The properties are located in unincorporated San Mateo County, California and include three parcels labeled as: One, Two and Three. The plan area totals 48.47 acres and is adjacent to Guadalupe Canyon Parkway and bounded to the west by the Crocker Industrial Park and San Bruno Mountain State and County Park.

Parcel One APN numbers are 090-090-250, 005-260-180 and 005-260-370 (20.93 Acres) (Figure 2).

Parcel Two APN numbers are 090-100-250, 005-270-100, 005-260-380 (27.43 Acres) (Figure 2).

Parcel Three APN is 005-260-360 (4,481sq.ft./ 0.11 Acres) (Figure 3).

The project area lies within the Dairy/Wax Myrtle Ravine (Parcel One and NW section of Parcel two), Devils Arroyo (Parcel Two) and NE Ridge (Parcel Three) Management Units of the SBMHMP (TRA, 2008). The habitat units are described as grassland in Parcel One (20.93 acres) and coastal scrub habitat in Parcels Two (27.43 acres) and Three (0.11 acres).

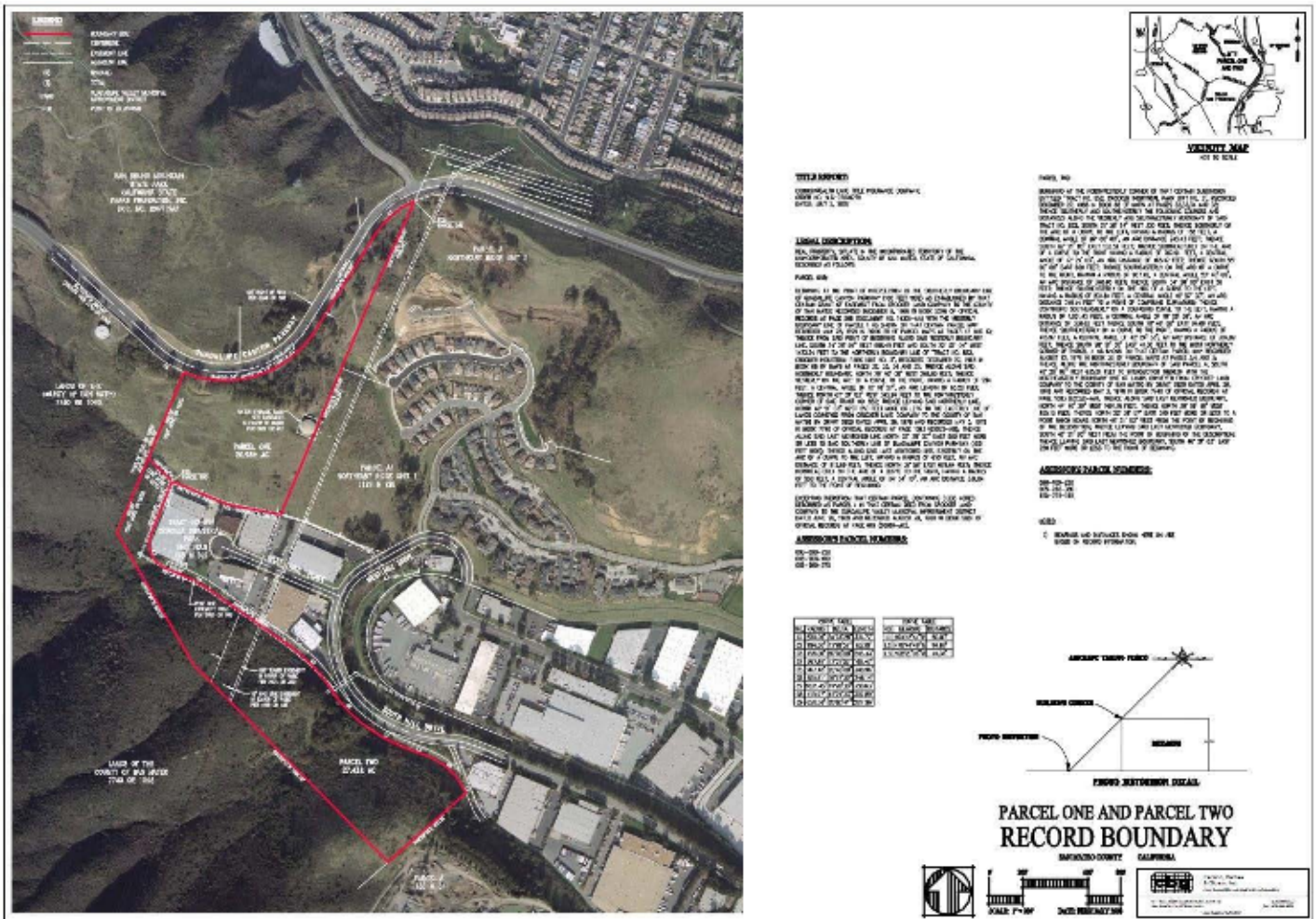


FIGURE 2: PARCEL 1 (LOCATED IN NORTH PORTION OF MAP) AND 2 (SOUTH) DETAIL MAP



FIGURE 3: PARCEL 3 DETAIL MAP

II. Site history that will influence restoration and management

Effective management of invasive species and restoration of habitat requires attention to historic land uses and vegetation dynamics. One notable impact of site history is the existence of non-native seed banks within the project area. Soil disturbance can often stimulate germination. Treatment of seed banks, by stimulating germination and subsequent treatment of plants before maturity, will likely be needed in order to meet SBMHCP requirements.

A. Parcel 1

Efforts to control five primary weeds in Wax Myrtle Ravine (WMR) began in 1987 and 1992. The herbaceous weed is *Foeniculum vulgare* (fennel), weedy brush species are *Ulex europaeus* (Gorse), *Genista monspessulana* (French broom), *Cytisus scoparius* (Portuguese broom) and weedy tree seedling outlier species is *Eucalyptus globulus* (eucalyptus). The weedy scrub vegetation covered most of the south facing slopes of this parcel and the eucalyptus along the northern and western margin. The seed bank is almost exhausted from continued control and the remaining seeds will have minimum impact. Although it is unlikely the entire seed bank will be exhausted (with some weed seeds having banks of upwards of 80 years), the treated areas should be in a

condition of minimal maintenance where occasional weed work will be required. Additional followup at the 7year mark is recommended so as not to lose five years of weed work.

Fennel control was added to the weed management efforts in 1992, denoting that this species is present and has occupied this site for at least 25 years. It is expected a seed bank of this species will be present on-site.

Coyote brush has also been controlled on site starting in 2013. The coyote brush control was part of a habitat restoration project from 2013 to 2015 that covered 1500 sq. ft. at the western margin of the parcel adjacent to Brisbane Water Tank 3 (BWT3). This control effort has allowed for lupines and Mission Blue butterfly (MB) (*Icaricia icarioides missionensis*) nectar plants that thrive in former coyote brush scrub areas. In addition to seed bank, there will likely be propagules from wind dispersed plants blowing in and colonizing the site, most notably coyote brush.

B. Parcel 2

Invasive plant management also started in 1992 along the eastern boundary of the parcel known as “Hill West of Quarry” (Figure 1). The primary weeds were French broom, Portuguese broom and fennel. These species were greatly reduced with annual control efforts over the years.

A loss of grassland has been observed over the years, attributed to the expansion of the native coastal scrub along the western ridge above the control zone. Native coyote brush and poison oak were removed on Hill West of Quarry in 2015. The area was subsequently out-planted with native grasses, forbs, and MB host plants. The soil was disturbed during the planting and we expect for a seed bank of coyote brush scrub vegetation (northern coastal scrub Holland type vegetation) to be present in the project area. In addition to seed bank, there will likely be propagules from wind dispersed plants blowing in and colonizing the site, most notably coyote brush.

C. Parcel 3

Parcel 3 has received limited attention over the years. It is located in the Carter-Martin Management Area and includes only a small portion of this area. Native scrub species, trees, and invasives surround this parcel and it is likely there will be a great deal of seed dispersal into this area as long as the adjacent areas remain dominated by invasives. Adjacent areas are within the HCP, but those lands have not received regular management attention, therefore making this Parcel the lowest priority of the three to be dedicated.

This parcel is located adjacent to the Guadalupe Parkway, downslope from the road. The road will act as a vector for transmission of invasive plants, and it is expected that there will be a unique and unpredictable flora of plants that will colonize this edge. Restoration and management efforts need to pay close attention to this habitat edge, and future efforts (and maintenance dollars going to this parcel) should be carefully scrutinized.

III. Current site conditions

Effective control of invasive plants must take into consideration any adjacent land that may contribute seeds and propagules that will regularly colonize the project area. The project site is surrounded by areas similarly dominated by non-native species, five of which are considered high-priority invasive weed species on San Bruno Mountain. Invasive weeds will have the largest impact on restoration success. Additionally, it is expected that with their removal, habitat for some fauna (i.e. rabbits, field mice, birds of the coyote brush scrub) may be impacted in the short term, until those species relocate to an adjacent habitat that is not being restored. Wildlife will be able to easily relocate to similar habitat in adjacent areas no more than a distance of $\frac{1}{4}$ to $\frac{1}{2}$ mile from the project area. Native vegetation will also be impacted during this process of restoration and anticipate nitrogen deposition and urban impacts to be inconsequential.

Climate has been changing in the Bay Area, and in recent years, precipitation has been extraordinarily variable on both an annual basis, but also on a frequency, duration and intensity (Ekstrom and Moser 2012). Additionally, the average number of extreme heat days (above 76 degrees coastally) is increasing quickly over historic averages (ibid). Given these conditions, restoration of habitat, which is most effective in areas with regular water and more regular, cooler temperatures, is becoming increasingly difficult since fewer and fewer years seem to have ideal conditions for plant germination and establishment. Planting from plugs (container plants) and direct seeding will become increasingly difficult to plan and execute with high confidence unless a nearby water source can be used for supplemental irrigation. Even with supplemental irrigation, extended hot and dry periods will severely impact plant establishment.

A. Vegetation (General)

The existing plan area vegetation consists of a combination of northern coastal scrub, native perennial grassland and nonnative/ruderal disturbed grasslands. The species present in the northern coastal scrub are typical of the *Baccharis pilularis* Shrubland Alliance and the *Artemisia californica* Shrubland Alliance (Sawyer et al., 2009). The grassland species are typical of (*Stipa pulcra*) Natural Stands; (*Festuca rubra*) Natural Stands; *Avena (barbata, fatua)* Semi-Natural Stands; *Bromus (diandrus, hordeaceus)/Brachypodium distachyon* SemiNatural Stands; *Festuca perennis* Semi-Natural Stands and *Phalaris aquatica* Semi-Natural Stands.

The plan area lies within the Dairy/Wax Myrtle Ravine and Devils Arroyo Management Units of the SBM Management Plan (TRA Environmental Science, 2008), which describes the units as grasslands and coastal scrub habitats. The plan area includes both Vegetation Management Priority II, III and IV Areas, which the SBM Management Plan describes, respectively, as somewhat important to less important habitat areas located within and surrounding the core habitat areas, and lower management priority areas due to limited presence of butterfly habitat from invasive species.

B. Invasive species

Within and adjacent to the plan area, weed species typical of ruderal disturbed grasslands are present. Table 11 presents the 11 priority weed species observed within and adjacent to the plan area that are included in the 61 priority invasive plant species listed in the SBM Management Plan. A provisional plant list for each parcel is located in Appendix B of this document.

Invasive Species	Estimated density in Plan Area (Percent)	Parcel 1	Parcel 2	Parcel 3
<i>Carduus pycnocephalus</i> (Italian thistle)	1	X	X	X
<i>Conium maculatum</i> (poison hemlock)	1	X	X	
<i>Cortaderia jubata</i> (Jubata grass)	1		X	X
<i>Cytisus striatus</i> (Portuguese broom)	15		X	
<i>Eucalyptus pulverulenta</i> (silver mountain gum)	20	X	X	
<i>Foeniculum vulgare</i> (fennel)	5	X	X	X
<i>Genista monspessulana</i> (French broom)	20	X	X	X
<i>Hypericum perforatum</i> (St. John's wort)	40	X		
<i>Oxalis pes-caprae</i> (Bermuda buttercup)	1		X	
<i>Raphanus sativus</i> (Wild radish)	5	X	X	X
<i>Rubus armeniacus</i> (Armenian blackberry)	15		X	
<i>Ulex europaeus</i> (gorse)	20		X	

TABLE 1: SBM MANAGEMENT PLAN PRIORITY INVASIVE PLANT SPECIES PRESENT WITHIN AND ADJACENT TO THE INTEGRATED WEED MANAGEMENT PLAN AREA. SURVEY COMPLETED BY M. FORBERT (WEST COAST WILDLANDS, APR. 2013)

Eucalyptus has existed within areas of parcels 1 and 2 for at least 50 years, if not 100+ years. Mature trees have deposited enough litter and organic material to significantly change the soil biology and chemistry. These eucalyptus trees serve as habitat for wildlife, including great horned owls, as well as a wind break for lower lying vegetation. The thinning and corraling of the larger stands should not adversely impact wildlife or native flora since much of the core areas will retain large trees (typically > 12" DBH) that will retain wildlife habitat. Although the forest will be thinned and trees (< 6" DBH) will be removed, we are uncertain if wind patterns will change within the known habitat for MB and Callippee Silverspot (CS) butterflies.

The gorse and broom species displace native plant and forage species. They are strong competitors and can dominate a plant community, forming dense monospecific stand. Seeds are toxic to ungulates. Mature shoots are unpalatable and are not used for forage except by rabbits in the seedling stage (Bossard and Rejmajnek 1994). The seeds can exist in the soil for many years and emerging seedlings required control after the mature plants are removed. Fennel, gorse, and French broom grow in intermittent locations throughout these parcels. These shrubs and sub-shrubs will invade areas where the soil is disturbed and can exclude or prevent reestablishment of native plant species. They can drastically alter the composition and structure of many plant communities, including grasslands, coastal scrub, riparian, and wetland communities. These taxa appear to outcompeting native species (directly) for light, nutrients, and water and perhaps by exuding allelopathic chemicals that inhibit germination and growth of other plants (Granath 1992, Colvin 1996, Dash and Gliessman 1994). There has been ongoing control of these species at the site with substantial reduction but, not eradicated. Additional effort is necessary to remove existing mature plants. Klamath weed (*Hypericum*

perfoliatum) is an invasive perennial that is located in a small (ca. 50 m²) patch in parcel 1. This plant has been shown to colonize and form monocultures in wetter habitats such as Fort Ord. Since this plant is highly localized we recommend immediate efforts to eradicate this plant.

C. Native Flora

Native flora and vegetation will be impacted with this RIMP. We expect to reduce the number of acres of Coyote brush (*Baccharis pilularis*) scrub within several areas in Parcels 1 and 2, while increasing acreage of grassland and lupine scrub. Since both of these habitat types are to be protected, according to the SBMHCP, we anticipate that these changes will have a beneficial impact on covered wildlife. Coyote brush has volunteered slowly and replaced some of the previous weedy brush in Parcel 1, but we hope to further slow succession and restore grassland and lupine scrub vegetation.

Parcel 3 will be predominantly managed for invasives control (more discussion in Chapter 4). No RTE or covered species (updated list from Weiss et al. 2015) will be impacted with restoration and management activities. A preliminary plant list is presented in Appendix A.

D. Wildlife

Wildlife can have profound negative impacts on restoration efforts. Most notably, survivorship of newly planted plugs can be greatly impacted with a poorly timed browse. Although deer are not present on SBM (Allshouse, pers. com.) we expect that rodents, and especially rabbits could impact new plants. Rabbit herbivory is typically most common near scrub, so we anticipate clearing a larger area of scrub near restoration plantings (20 foot buffer), which should discourage herbivory. We don't expect any other wildlife impacts due to restoration efforts.

E. Nitrogen Deposition

Nitrogen deposition will not likely impact this area of the mountain since it is shielded from the predominant winds blowing from west to east. Figure 8-04 from Weiss et al. 2015 (Figure 4) shows limited or low deposition within our project areas. Although some of parcel one is located just to the right of the light blue "Lower Nitrogen Deposition" area, we expect that given the type of industrial activity and the quantity of it all of Parcel 1 could be considered a "Lower Nitrogen Deposition" area (Weiss, pers. com.).



FIGURE 4: NITROGEN DEPOSITION ZONES- FIGURE 8-04 FROM WEISS ET AL. 2015.

F. Urban/Development Impacts

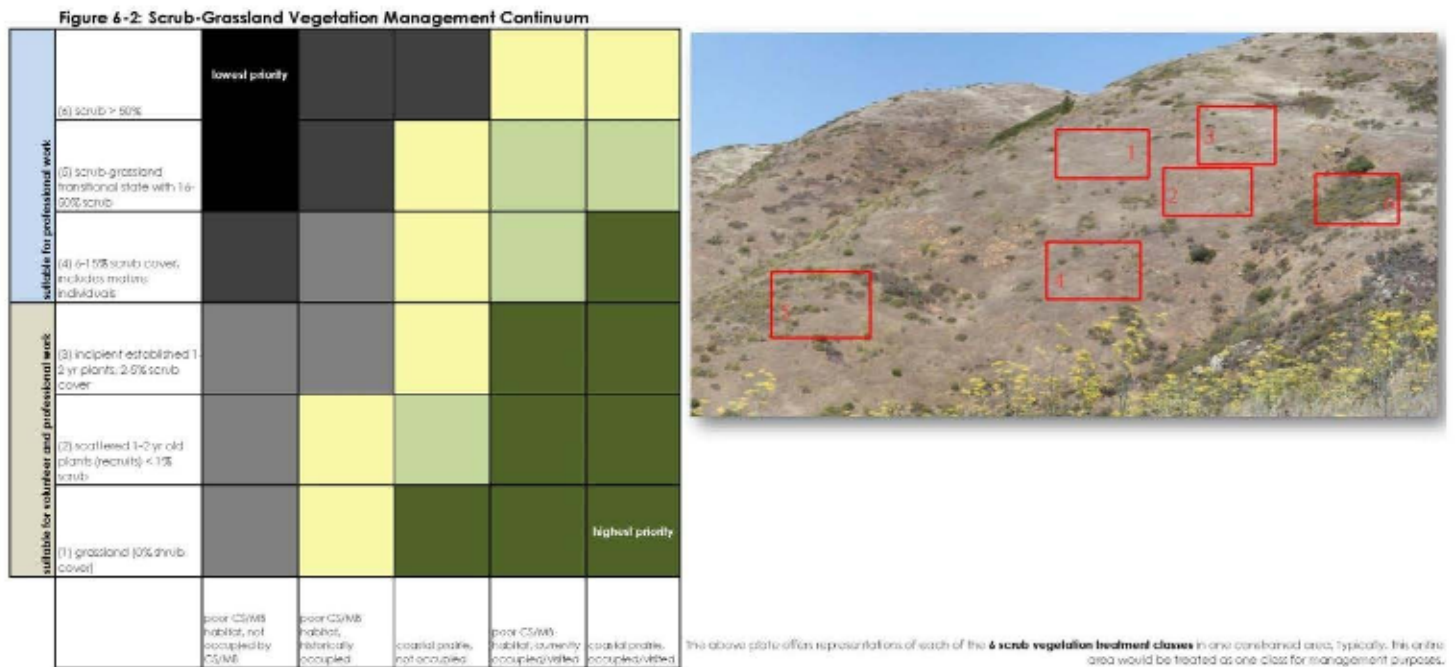
Urban and development impacts are most likely going to occur from three sources: 1) the housing development immediately to the east of Parcel 1, 2) the peninsula of industrial development which Parcels 1 and 2 surround, and 3) Guadalupe parkway which runs near the border of Parcel 3 and just above Parcel 1. We expect the housing development may contribute walkers and hikers who will use the sight for recreation. Proper signs denoting this as a restoration area should minimize human impacts to the restoration efforts. Pets and feral animals are often associated with housing developments and it is possible they could have an impact on wildlife, especially butterflies. Finally, major roads always present a challenge since they are often vectors by which invasive plants disperse. For this reason, habitat areas near the road need to be regularly monitored for new weeds, while minimizing soil disturbance so new invasives have a more difficult time colonizing the soil. We recommend that any vegetation management by road and transportation agencies avoids the use of herbicides and any techniques that disrupt the soil, such as scraping and digging.

IV. Restoration and Management Goals and Priorities

A. Process Overview

The restoration and stewardship of the three McKesson parcels will be founded on well understood tenants of restoration ecology (SER-SPWG 2004), mixed with practical and local knowledge. This plan will set reasonable expectations for restoration and management given the constraints of the budget. The following plan is not, strictly speaking, a restoration plan. This plan directs and describes management activities that will reduce invasive plants while creating conditions wherein restoration may be effective. This plan is titled the Restoration and Invasives Management Plan (RIMP) because there are two critical management actions that are planned: invasive plant removal and reduction of propagule spread (invasive management) and restoration of desirable vegetation communities that help meet the goals of the SBMHCP.

This plan recommends the management of the entire project area for select invasives that can impact the long-term ecology of the site. Restoration actions have been directed into areas where we believe success is more likely, and ecological benefits are maximized. Areas that have been recently invaded are top priority, reducing the conversion of desirable habitat to less desirable habitat. Figure 6-2 from Weiss et al. (2015) presents a hierarchical scheme for selecting grassland areas for restoration (Figure 5 in this report, also reproduced larger as Appendix A).



Coastal grassland and scrub coastal scrubland vegetation communities often coexist. With a lack of disturbance, the scrub will usually succeed the coastal grassland. This process can occur slowly or very quickly depending on soil, aspect, seed source, and climate. Blocks of the chart filled with shades of green are high priority management targets, with high quality grassland and/or occupied CS/MS habitat. Priority is reduced as the colors fade to black when conditions are typically mature scrublands with no CS/MS. Historically occupied habitat in high quality grassland is an intermediate priority.

FIGURE 5: STRATEGIES FOR RESTORATION OF GRASSLAND HABITAT ON SBM. FROM WEISS ET AL. 2015.

The RIMP is intended to be iterative and dynamic in nature. A standardized monitoring protocol is described which will allow for the quantitative comparison of results. If results are not meeting success criteria, there are two solutions: 1) keep attempting and repeat the current protocol if it seems external forces derailed success, or 2) revise the plan with the San Mateo Parks Department Natural Resource Manager with input from the

SBMHCP Technical Advisory Committee (TAC). While some changes are always anticipated, we recommend that each technique/trial is at least followed for 2 full years before it is significantly altered or amended.

B. Priority Vegetation Communities to be Restored

Native vegetation communities that host covered species, according to the SBMHCP, are prioritized. This RIMP prioritizes the restoration of habitat for the MB and the CS. Additionally, communities that support covered plants listed as SBM RTE species (see Naumovich and Niederer 2016) are considered high priority for restoration. We utilize a hybrid approach to naming the vegetation communities of interest. Although the Manual of California Vegetation (Sawyer et al. 2009) is considered the standard, it is often too specific and may make monitoring and data interpretation difficult. Therefore, we select a few key features (membership rules) to define the preferred community. These definitions are intended to be vague because too high of a level of specificity will limit our measurement of success.

The following plant communities are prioritized for restoration in this plan:

- **Silverbush lupine (*Lupinus albifrons*) scrub community** – This vegetation type is defined by perennial lupine plants constituting 50% relative cover in the shrub layer. Large native shrubs will be removed before they mature and not count towards success criteria in this community, e.g. coyote brush, toyon, California sagebrush, poison oak, and other perennial plants that will overtop and convert habitat away from Silverbush scrub. In contrast, a subshrub such as golden yarrow (*Eriophyllum confertiflorum*) is considered desirable. Since this is a short lived species and tends to occupy steep and unstable slopes with regular disturbance (Sawyer et al. 2009). This vegetation type provides habitat for MB. Tall annuals and woody vegetation (including native species like coyote bush, toyon and poison oak) should be considered the “shrub layer” if they obscure mature lupine plants. Other perennial lupines that are native to our area maybe considered part of this shrubland community.
- **Coastal prairie grassland community** – Coastal prairie grassland is a species rich, mesic habitat that typifies many of the northern slopes of SBM. This habitat is rich in diversity (at least 8 species per ¼ m² quadrat) and contains a mix of perennial grasses, forbs and semi-woody perennials that can form dense stands (i.e. poison oak, hummingbird sage). Woody shrubs should not account for more than 5% relative cover. This habitat often forms ecotones with dense north coastal scrub that is dominated with (>50% relative cover) woody native shrubs. Although north coastal scrub is desirable habitat for the SBMHCP, coastal prairie grasslands, and grasslands in general are vanishing from the mountain, so it is important to maintain and expand existing resources when the ecological conditions allow. *Viola* (*Viola pedunculata*) will likely occur in this habitat type and is valuable to encourage due to its role as the host plant for the CS. Management activities such as mowing and weeding may be important to test for their role in improving viola cover.
- **Purple needlegrass (*Stipa pulchra*) herbaceous community** – Purple needlegrass is a caespitose long lived perennial grass that should comprise 10% or greater of the relative cover (Sawyer et al. 2009). Woody shrubs greater than 1 meter should not be more than 10% of the relative cover (other than lupines), although it is optimal shrub cover is < 2%. Fire and grazing are important in maintaining this vegetation (Sawyer et al. 2009) and thus, we will consider the mowing of these areas at the time of early seed development to reduce competing annual grasses. This technique has been successful in the

East Bay (Naumovich 2015), although it likely needs to be repeated for 2 successive years in areas with established non-native annual grass seed banks. *Viola* (*Viola pedunculata*) will likely occur in this habitat type and is valuable to encourage due to its role as the host plant for the CS.

- **Bearberry Manzanita scrub** – This vegetation type is extremely limited on SBM. It occurs in two areas near the Southeast Ridge where seven *Arctostaphylos uva-ursi* forma *leobreweri* plants are located (Naumovich and Niederer 2016). This plant effectively forms a dense mat of vegetation with limited associates. It will be attempted to be colonized in parcel 2. This will be an experimental restoration trial. We recommend propagation of cuttings in perlite or other similar soil-less system.

C. Methodology for Prioritization of Areas for Restoration and Management

Funding and time are always limiting in restoration and management projects. Often, it can be difficult to prioritize goals, but with the input of the TAC, 2007 Habitat Management Plan, the 30-Year SBMHCP review we were able to identify restoration and management goals and areas with near consensus from all involved parties (SMCP staff, TAC, interested community members and volunteers, biological consultants). Integrating information from these three sources, priority areas for this project were determined using the following set of parameters:

- Invasiveness and ecological impact of target weeds, including distribution on SBM and amount of historic effort placed on control and eradication. Weeds with limited distributions with a high potential for impact were highly prioritized (i.e. St. John's wort).
- Proven track record for treatment of target invasive was important in deciding how to prioritize work and funding allocation.
- Occurrence (historic and present) of covered species and associated host plants within the project area (Figure 6) allowed us to prioritize restoration of specific areas.
- Priority Grasslands Management Map from 30-Year SBMHCP Review (Weiss et al. 2015) (Figure 7) further allowed for analysis of where a historic seed bank for nectar plants for MB and CS may exist.

Final selections of restoration areas (Figure 8) were vetted and voted on by the SBMHCP TAC on December 10, 2015 (See Figure 9 for tallied results from the survey on restoration actions). Results from Figure 9 clearly indicate value in continuing the management of invasives and restoration actions. In addition, interest around the restoration of rare plant habitat was noted. Monitoring was highly valued as well. All of these actions will be central to this plan.

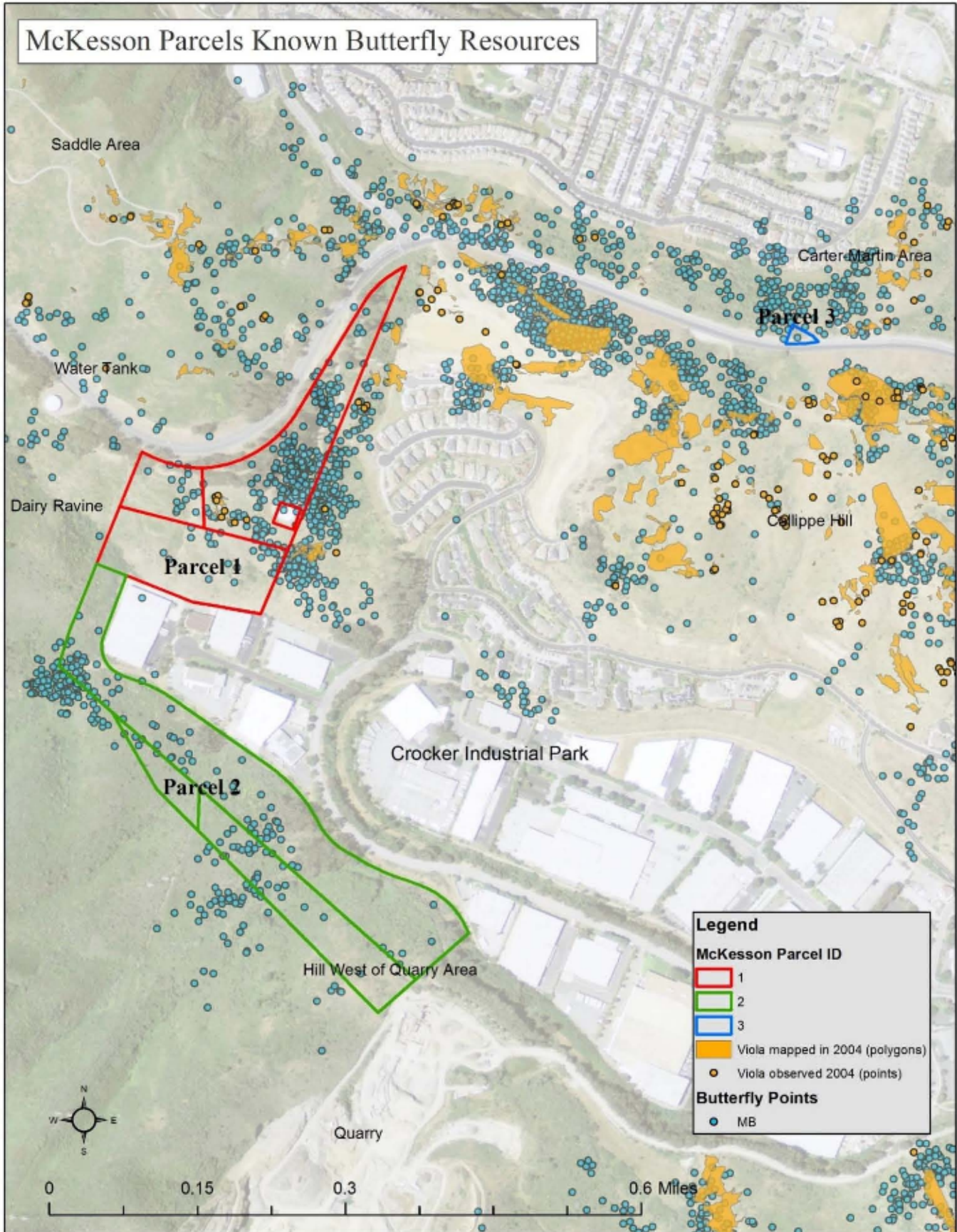


FIGURE 6: DOCUMENTED AREAS OF BUTTERFLY RESOURCES GERMANE TO THE RIMP.

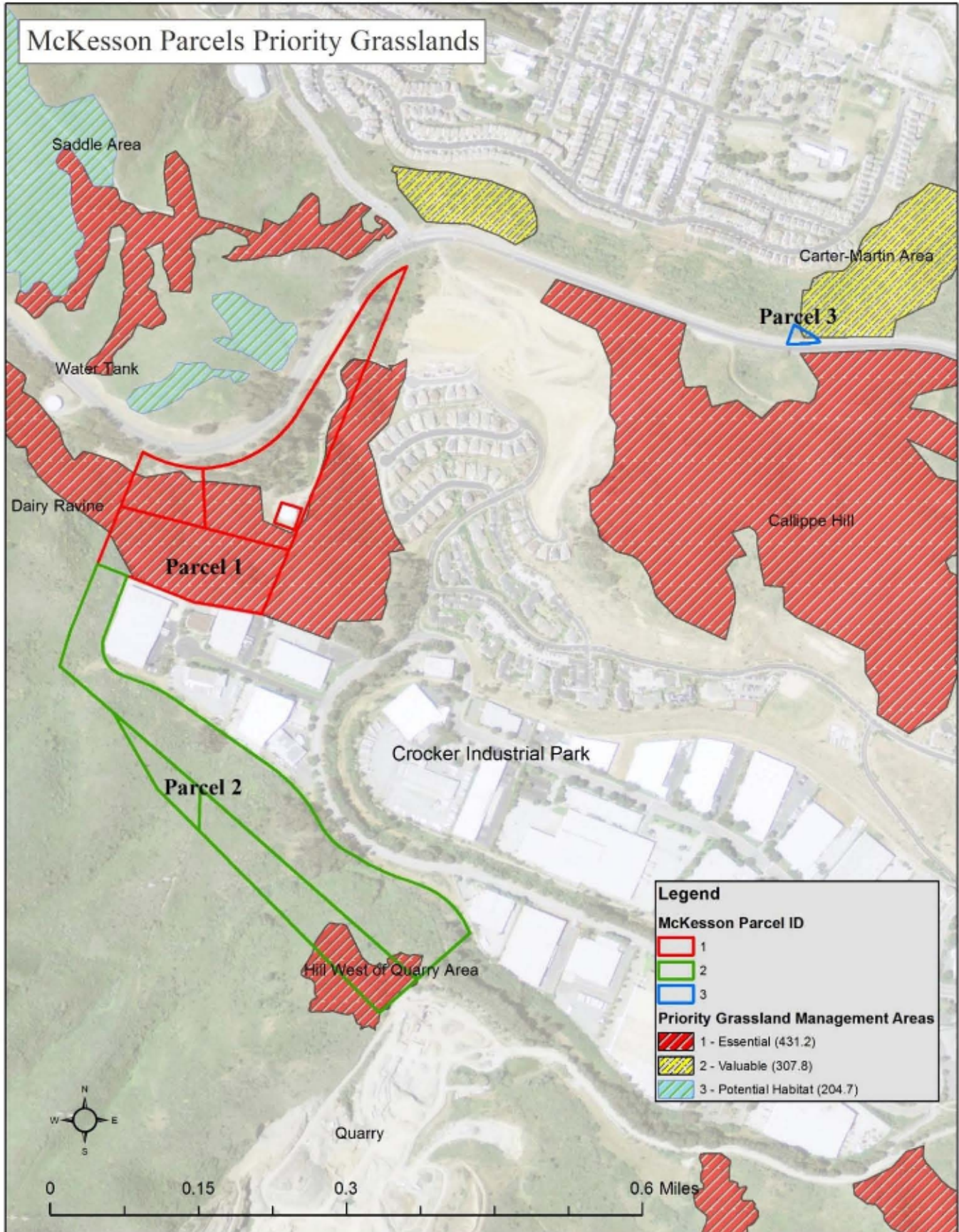


FIGURE 7: PRIORITY GRASSLANDS IN THE PROJECT AREA AS IDENTIFIED IN WEISS ET AL. 2015.

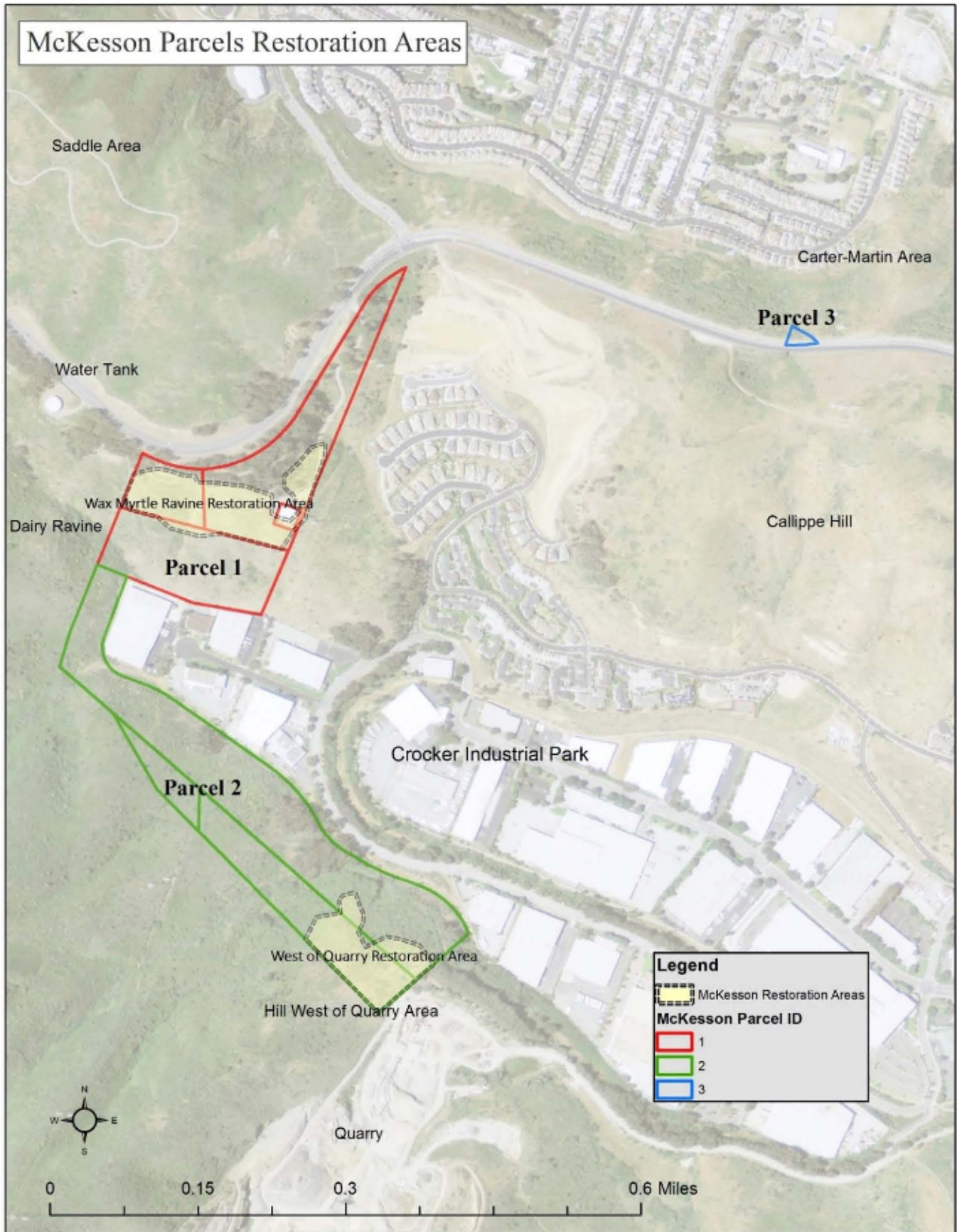


FIGURE 8: PROPOSED AREAS OF RESTORATION INPUT – IDENTIFIED AS RESTORATION AREAS.

McKesson Restoration Dedication Prioritization

NAME: Tallied Results

Please use the McKesson handout and maps to help aid you in evaluating and prioritizing the projects proposed below. The McKesson dedication lies in two different management units:

1. Dairy and Wax Myrtle Ravines (214 acres)
2. Devil's Arroyo (268 acres)

Management Unit Scoring for these two MU:

Management Unit	MB HV	CS HV	SBE HV	BC HV	ND HV	Total Score
Dairy & Wax Myrtle Ravines	M (2)	M (2)	H (3)	L (1)	M (2)	10
Devil's Arroyo	M (2)	M (2)	H (3)	M (2)	H (3)	12

MB = Mission Blue CS = Callippe Silverwing; SBE = San Bruno Elfins BC = Bay Checkerspot; ND = Native Plant Community Diversity and Dominance HV = Habitat Value H, M, L = High (3), Moderate (2), Low (1) NP = Not Present (2) Information provided in USFWS approved 2007 Habitat Management Plan.

I. Proposed Budget for the 5 Year McKesson Vegetation Management and Restoration Plan

1. Restoration - \$100,000
 - a. Restoration is to restore areas to MB and CS appropriate habitat patches in highest priority areas identified in the 30-year Assessment by Creekside within each management unit.
 - i. County Parks NRM Questions?
 1. What activities in the menu will these funds cover?
2. Primary and Secondary Invasive Plant Control - \$250,000
 - a. County Parks NRM Questions?
 - i. What activities in the menu will these funds cover?
 - ii. Will these funds be used for initial and secondary invasive species invasions in the restoration areas?
3. Eucalyptus removal up to 6' dbh (diameter-at-breast-height) in WMR Parcel 1 - \$30,000
4. Expenses for future adjustments to the Plan - \$20,000

Activity	Proposed Budget	Rank of Importance
Restoration	\$100,000	1 (2)
Primary Invasive Control	\$250,000	2 (1)
Eucalyptus Containment	\$30,000	3
Contingency	\$20,000	4

Provide a rank of 1-4 for each category

One individual did not rank these. Three ranked as shown above and the ranking in parentheses was the only disagreement.



II. Wax Myrtle Ravine Restoration Area - Dairy & Wax Myrtle Ravine MU

We are asking the TAC to consider the options listed in the table below provide funding %'s for each from 0 (none) to 100%. Some funding must be included for monitoring (we recommend at least 20% in order to report results properly).

	Activity	Rank
1	Control of target invasives in invasive plant management plan (FOEVUL, GENMON, CYSSTRI, others)	4
2	Eradicate nascent weed populations - <i>Alysicarpus</i> spp. (EDRR)	2
3	Eucalyptus control of saplings - create a management area based on historic eucalyptus zone. Remove all saplings beyond this established zone. (See Figure 3)	4
4	Multiple year reduction of north coastal scrub species (including BACPIL, ARTGAL, TOXDIV, others) <ol style="list-style-type: none"> i. Including creating/connecting high quality habitat on south slopes with east facing slopes (which are currently much more scrub dominated) ii. Tiered in concentric circles moving outward from core 	4
5	Increase in Viola cover with small scale transplants/cores (remnant populations present)	3
6	Increase in Lupinus spp. (consider <i>L. formosus</i> provisionally) <ol style="list-style-type: none"> i. Outplanting ii. Direct seeding into bare ground iii. Partially scraped bare ground seeding 	4
7	Increase habitat for other rare plants (IRILON and ERYFRA, for example) <ol style="list-style-type: none"> i. Direct seeding or transplanting rhizomes IRILON ii. Direct seeding trials for ERYFRA 	1
8	Observation of MB and CS in restoration area (egg surveys for MB, adult for CS)	3
	Monitoring	Rank
9	Total of 6 transects - 4 treatment monitoring transects and 2 controls (Figure 8.9 on page 4) <ol style="list-style-type: none"> i. WMR south face - transect in scrub encroachment area with lupines and viola ii. WMR suc - at the Eucalyptus/scrub interface where suc will be removed iii. WMR control - south facing slope outside of main treatment area. In SW portion of site where gorse reduction was completed years ago, south facing slope 	4
10	Egg Surveys for MBB in spring (Apr-May, as timed by phenology of butterflies)	3

	i. Use methodology as established on Twin Peaks - sample plants along the transects or in the restoration area 2-3 times with a 3-standardized search time (say 4 person hours)	
11	Adult Surveys Callippe in summer (May-June, as timed by phenology of butterflies) <ol style="list-style-type: none"> i. Complete CS surveys along transects when butterflies are in peak flight - coordinate with other consultant doing CS monitoring work. 	3

Percent ranking guidance: 1. <1% = Not a Priority; 2. 1-5% = Lowest Priority (only if funds allow); 3. >5-15% = Low Priority; 4. >15-25% = Low to Moderate Priority; 5. >25-50% = Moderate Priority; 6. >50-75% Moderate to High Priority; 7. 75% or greater = Highest Priority

III. West of Quarry Restoration Area - Devil's Arroyo MU

We are asking the TAC to consider the options listed in the table below provide funding %'s for each from 0 (none) to 100%. Some funding must be included for monitoring (we recommend at least 20% in order to report results properly).

	Activity	Rank
1	Control of target invasive species in invasive plant management plan area (FOEVUL, GENMON, others)	4
2	Multiple year reduction of north coastal scrub species (including BACPIL, ARTGAL, TOXDIV, others) <ol style="list-style-type: none"> i. Including creating/connecting high quality habitat on south slopes with north facing slopes (which are currently much more scrub dominated) ii. Tiered in concentric circles moving outward from core 	4
3	Increase in Viola cover with small scale transplants/cores (remnant populations present)	3
4	Increase in Lupinus spp. (consider <i>L. formosus</i> and <i>L. varicolor</i> provisionally) <ol style="list-style-type: none"> i. Outplanting ii. Direct seeding into bare ground iii. Partially scraped bare ground seeding 	4
5	Increase habitat for other rare plants (ARABLE and ARCUVALEX) <ol style="list-style-type: none"> i. Expansion of <i>Acrobitis leucophaea</i> (Coast rock cress) utilizing seeding experiments on appropriate north facing rocky slopes in the ii. Trial outplanting of 10 cuttings from <i>Leobrycon's manzanita</i> (<i>Arctostaphylos uva-ursi</i> forma <i>leobrycon</i>) in appropriate rock outcrops on ridge 	2
	Monitoring	Rank
6	WQ north face - scrub encroachment area with lupines and viola	3
7	WQ SE face - hotter slope with lupines, near ridge (above high N deposition near Quarry) with viola and lupine	2
8	DA control - in Devil's arroyo directly SW of large eucalyptus grove with remnant grassland, untreated	1

Percent ranking guidance: 1. <1% = Not a Priority; 2. 1-5% = Lowest Priority (only if funds allow); 3. >5-15% = Low Priority; 4. >15-25% = Low to Moderate Priority; 5. >25-50% = Moderate Priority; 6. >50-75% Moderate to High Priority; 7. 75% or greater = Highest Priority

IV. Lupine Corridor Site Enhancement Area - Please Scrutinize!

We are asking the TAC to consider the options listed in the table below provide funding %'s for each from 0 (none) to 100%. Some funding must be included for monitoring (we recommend at least 20% in order to report results properly).

	Activity	Rank
1	The goal is to create a corridor with lupine that would connect Wax Myrtle ravine with the West of Quarry area (SE corner of Devil's Arroyo)	4
2	Steps include complete removal of scrub followed by directed seeding and planting of all three lupine species as well as direct seeding trials	3
3	Propose 9'-5x2 meter lupine beds along corridor, each planted with 100 lupines each year and 25 nectar plants for 2 years. (~ \$2500 materials) <ol style="list-style-type: none"> i. Ideally, these areas would first be scraped with a tillage or similar machinery removing non-native seed bank. ii. Success criteria - 20% lupine survival in 5 years, 50% relative native cover (with scraping), with <10% non-native cover, positive lupine egg surveys, Sites self-seeding. iii. Note this is an experimental enhancement, and it is expected that secondary invaders like thistles and non-native annual grasses will also establish on site. 	4

Percent ranking guidance: 1. <1% = Not a Priority; 2. 1-5% = Lowest Priority (only if funds allow); 3. >5-15% = Low Priority; 4. >15-25% = Low to Moderate Priority; 5. >25-50% = Moderate Priority; 6. >50-75% Moderate to High Priority; 7. 75% or greater = Highest Priority

County Parks NRM Questions:

1. Will this come out of the \$100,000 restoration budget?
2. Should the initial site preparation including scraping come from the primary and secondary invasive species budget?
3. How will this area be protected from the gorse, broom, and northern coastal scrub encroaching on this area after the dedication?
4. What priority does the TAC put on maintaining this work? This is critical if we are going to fund this activity.

FIGURE 9: TALLIED RESULTS, AND ORIGINAL FORM FOR RESTORATION PRIORITIZATION CIRCULATED AT THE SBMHCP TAC MEETING. READ TOP TO BOTTOM IN FIRST COLUMN, THEN MOVE TO THE SECOND COLUMN.

D. Monitoring Protocol

In order for monitoring to provide useful information, it needs to be easily repeatable, allowing comparison of multiple years of data with relative ease. We recommend utilizing a few well accepted vegetation monitoring techniques that will provide quantitative and qualitative reports on the efficacy of the RIMP. More particulars on monitoring are located in Chapter 5. Our general recommendations are as follows:

- Establish photopoints for sample invasives control area. Photopoints should be taken at least once a year in April-June, preferably at the time of data collection. A second photograph can be opportunistically taken during other seasons. Photopoints will be marked with T post mounted with a bracket for easy relocation. The T-post installation will be temporary.
 - St. John's wort polygon (parcel 1)
 - Eucalyptus edge at interface of treatment/non-treatment area (parcel 1)
 - Silverbush lupine scrub restoration area (parcel 1)
 - Coastal prairie restoration (parcel 2)
 - Manzanita restoration trial (parcel 2)
- Install permanent 50 meter transects for line transects in restoration areas and in control areas. Transects will be marked with rebar, capped with OSHA approved top cap.
 - 2 restoration areas, 1 control (parcel 1)
 - 2 restoration areas, 1 control (parcel 2)
- Install permanent stake at the northern-most point on the viola polygon. Using a wandering transect method, record plant density. Transect will be marked with rebar, capped with OSHA approved top cap.
 - 1 restoration area (parcel 1)
- Annually record population count, size, reproduction, and/or plant condition information (as pertinent) for RTE plant reintroductions/introductions in permanent plots delineated with rebar at 4 corners.
- Annually report survivorship after 1 year of any outplantings/restoration plantings.

E. Measures of Success

Success of this project will be measured annually by three metrics:

1. Reduction, control, eradication of target invasives
2. Restoration success of target vegetation communities, native species cover in restoration areas, covered species utilization of restoration areas
3. Reintroduction and establishment of RTE species to appropriate areas using various propagation and seeding methods

V. Restoration and Invasive Management Activities

A. Project Naming Conventions

For formal documentation, restoration or work areas should follow current naming protocol for the SBMHCP. Since these will be funded by McKesson funds perhaps DW-P1-01 would indicate: Dairy/Wax Myrtle Ravine, Parcel 1. For shorthand, many sites will be referred to as “McKesson – Parcel 1”.

B. Integrated Weed Management Techniques and Implementation

This section describes measures to be implemented for Parcels One, Two and Three.

B.1. Techniques

The following categories of control will be used: **B.1.a.** Manual/Mechanical pulling, cutting and removal and **B.1.b.** Herbicide application.

B.1.a. Manual/Mechanical Cutting

Mechanical cutting is a viable management option for four of the target weed species on the project site—Broom, Eucalyptus, Gorse and Fennel. The manual and mechanical tools include loppers, weed wrenches, pruning saws, brush cutters and chainsaws. For the target weed species, Fennel, the mechanical method with a brushcutter is used to mow at soil surface and stimulate new growth prior to seed set allowing for foliar herbicide application when the plant leafs out again.

The following six of the eleven target species are appropriate candidates for manual/mechanical control throughout the year described. The weed control will be implemented during the spring and fall months.

Fennel—The SBM Management Plan suggests treatment of mature fennel stands in the HCP area prior to herbicide applications that should be conducted in the spring to fall. Therefore mechanical removal of the above ground plant material using brushcutters and long handed clippers will be conducted during the spring through fall.

French Broom—Individuals or small patches will be removed by hand where feasible. Hand removal will entail pulling of the entire above-ground plant and at least the upper 4 inches of the roots. Hand removal will occur during the period February– March (prior to seed set) ideally when the soils are moist, which facilitates complete removal. Seeds will be flushed in the first year by disturbing soils with a fine tined rake or similar. Raking should occur where dense stands once stood, where large seed banks may be present, not in high quality habitat areas. Flaming will occur in dense seedling patches the following year.

Gorse—Individual seedlings will be removed either by pulling or by using a hand tool (weed wrench, Pulaski, mattock) on larger individuals or clumps. The entire above-ground plant, crown, and at least the top section of roots will be removed to prevent re-sprouting. Removal

will be conducted during the late spring or early summer prior to seed set. All inflorescences will be bagged and removed from the site. Seeds will be flushed in the first year by disturbing soils with a fine tined rake or similar. Raking should occur where dense stands once stood, where large seed banks may be present, not in high quality habitat areas. If useful and within budgetary constraints, dense areas/gorse leaf litter or duff may be experimentally raked and removed from site to reduce biomass and seedbank. Flaming will occur in dense seedling patches the following year.

Portuguese Broom—Individuals or small patches will be removed by hand where feasible. Hand removal will entail pulling of the entire above-ground plant and at least the upper 4 inches of the roots. Hand removal will occur during the period February– March (prior to seed set) ideally when the soils are moist, which facilitates complete removal. Seeds will be flushed in the first year by disturbing soils with a fine tined rake or similar. Raking should occur where dense stands once stood, where large seed banks may be present, not in high quality habitat areas. Flaming will occur in dense seedling patches the following year.

Blue gum—Individual seedlings and small saplings (up to 2-3 years old (2" stem thickness)) will be pulled using a weed wrench. Hand removal is appropriate at any time of year, but is much more effective when soils are wet, but not completely saturated.

St. John's Wort – Individuals and small patches will be hand-pulled near the time of budding/bolting so that root growth is minimal (May-June).

B.1.b. Herbicide Applications

Herbicides will be used to control target weed species where hand removal or mechanical cutting are not feasible based on the number of plants present, the age or size of the plants, and/or when soil moisture conditions would not allow for effective hand removal. Herbicides will also be used where they have been shown to be the only effective means of controlling a particular weed species. The tools to apply herbicides will be a professional spray bottle, backpack sprayer and a 125-gallon spray rig. Herbicide use is expected to decrease with time, as hand work becomes more effective and safe this method of treatment will be prioritized.

B.1.c. Definitions

- **Foliar application (spray to wet)** – Application of 2% solution (various herbicides) to green plant material until all leaves are wet but not dripping. Application is completed with backpack sprayer
- **Basal bark application** – Application of 25% solution Garlon 4 ULTRA, sprayed from soil level to 2" above ground. Usually used for large plants with little foliage. Plant is left in place.
- **Cut stump treatment** – Application of 25% Garlon 4 ULTRA to freshly cut plant stump, on cut and on surrounding bark. Above ground vegetation is removed with this technique.

B.1.d. Species Specific Treatments

Bermuda buttercup—The SBM Management Plan states that spraying of a mix of Garlon® 4 Ultra, 2 percent concentration is used to treat Bermuda buttercup where it occurs as a monoculture. In the presence of a riparian corridor within 50 feet from the plan boundary, Roundup Custom®, will be used at 2 percent concentration. Roundup Custom is a product with the same active ingredient (glyphosate) and is approved for water use. Where it occurs in grasslands, Garlon® 4 Ultra two percent concentration is used in order to avoid damage to native grasses. Herbicide applications should be conducted in the winter or early spring.

Armenian blackberry—The SBM Management Plan states that foliar spraying of Garlon® 4 Ultra 2 percent concentration is used to treat blackberry where it occurs. Because of the presence of the riparian corridor about 50 feet from the plan boundary, Roundup Custom®, a product with the same active ingredient (glyphosate) that is approved for water use, will be used. Whenever blackberry exists within 10 feet of the riparian corridor, Roundup Custom will be used, otherwise Garlon® 4 Ultra will be applied. Where it occurs in grasslands, Garlon® 4 Ultra two percent concentration is used in order to avoid damage to native grasses.

Blue gum—The SBM Management Plan states that after individual trees are cut, stumps are cut as low to the ground as practical and sprayed with 25% Garlon 4ULTRA herbicide. Herbicide is applied within 2 minutes of the cutting of the tree.

Fennel—The SBM Management Plan states that basal foliar spraying of Garlon® 4 Ultra, 2 percent concentration, is used to treat fennel in the HCP area. Herbicide applications should be conducted in the spring.

French and Portuguese broom—The SBM Management Plan states that basal foliar spraying of Garlon® 4 Ultra, two percent concentration, is used to treat foliar application and a 25% for cut stump treatment in the HCP area. Herbicide applications can be conducted in the spring, summer and fall months.

Italian thistle—The SBM Management Plan (TRA Environmental Sciences 2008) states that foliar spraying of Garlon® 4 Ultra (triclopyr), two percent concentration, is used in the HCP area to treat Italian thistle. Because control of Italian thistle can be improved with pre and post emergent treatment, Milestone® (aminopyralid) will be used. This herbicide will only be used upon discussion with County Parks staff; it is intended for use in very extreme situations. Wick applications can also be used as a means of reducing the potential for secondary damage to adjacent native plants. Herbicide applications should be conducted prior to bolting in the spring or early summer.

Jubata grass—The SBM Management Plan states that Jubata (Pampas) grass is treated with 2% foliar application of Round-up Custom. Plants are treated with a foliar spray primarily in summer months before seed formation, but can be treated year round.

Poison Hemlock—The SBM Management Plan states that foliar spraying of Garlon® 4ULTRA, two percent concentration, is used to treat Poison hemlock in the HCP area. Herbicide applications should be conducted in the spring.

St. John's Wort – No protocol is present in the SBM Management Plan. Control St. John's wort was achieved within 3 years using a single foliar application of 2% glyphosate during active vegetative growth in the spring.

Wild radish—The SBM Management Plan states that basal foliar spraying of Garlon® 4 Ultra, two percent concentration, is used to treat wild radish in the HCP area. Herbicide applications should be conducted in the spring.

B.2 Implementation

During the first six months following the Plan implementation, treatment and monitoring visits will be conducted at least every 6 months to examine the site for target weed seedlings and secondary growth. If target weeds are present, they will be treated in accordance with the treatment measures described above.

When the work tables (Appendix B) are completed between the months of May and November, an additional visit will take place three weeks after the first substantial rains have occurred, as the rain will cause germination of seeds. If target weeds are present, they will be scheduled for treatment in accordance with the treatment measures described above.

Semiannual monitoring visits will be conducted of the project site for four years following the completion of the first year weed management to assess the presence of target weed species, and to treat target weeds as needed. Visits will be conducted in the fall and spring months to detect and treat target weeds prior to blooming, and prior to seed set.

Implementation of the plan is designed to achieve the specific and measurable plan goal of target weed density in the McKesson restoration areas (Figure 8) that is equal to or less than the density of adjacent reference areas within 5 years. The result is to achieve, within the five years, a reduction of at least eighty-five percent reduction of the mature stand. Target weeds will be reduced across the site. Areas with monoculture stands of gorse backing into native, mature coastal scrub vegetation will likely be the lowest priority.

B.2.1 Parcel 1 Implementation

The listed target weed species are already present and abundant within the plan area. The initial treatment will reduce the mature stand of the weed species during fall and spring implementation months. The follow-up treatments will manage any secondary and seedling growth. The erosion gully at the NW boundary of the parcel will be monitored for weed species now the repair is completed. Habitat restoration will occur the first and second year after the erosion site is repaired.

Work on the eucalyptus grove will be completed by West Coast Wildlands, Inc. All trees at 6 inch diameter at breast height (DBH) will be removed. The trees will be chipped and spread on site to a mulch thickness of no deeper than 6".

Construction equipment, especially earth-moving equipment, can bring seeds of the target weed species, or other species, into the plan area from other construction sites. The following measures will be implemented during the Eucalyptus removal projects to minimize the possibility of transporting additional weed seeds into the plan area:

- A biologist will be onsite to monitor all activities during the project.
- The eucalyptus removal area will be fenced in with a barrier fence to contain all equipment moving in and out of the project area.
- Prior to moving into the project area, construction equipment will be washed and visually inspected for weed species and for caked mud on the equipment and on its tires by the environmental inspector. Daily inspection will be required for vehicles that depart and re-enter the site.
- Entrance and exit routes will be demarcated in the field for heavy equipment
- Tree protection buffers will be used to protect roots of trees that will be retained
- Equipment will be on tracks to minimize compaction
- Some areas may require plywood to be placed down to further prevent compaction

B.2.2 Parcel 2 Implementation

The listed target weed species are already present and abundant within the plan area. In order to reduce the amount of perennial target weed species seed and biomass present, a three meter buffer zone adjacent to the Crocker Industrial Park boundary of the plan area will be established. Target invasive plants will be cut and removed from the site to a nearby green waste facility. The cut stumps will be treated with an aquatic herbicide to prevent secondary growth. The remaining weedy shrubs species will be treated using a foliar application of Garlon® 4 Ultra.

B.2.3 Parcel 3 Implementation

The initial treatment will reduce the mature stand of the listed weed species during fall and spring implementation months. The follow-up treatments will manage any seedling and secondary growth.

B.2.4 Measures to Protect Resources

The Habitat Management Impact Minimization Measures of the SBM Management Plan, which include measures to protect important resources such as nesting birds and water drainages, will be implemented as part of the plan. In addition, the following measures will be implemented:

- Survey for the special-status plant and animal species with potential to occur during the appropriate season to determine presence/absence. If a federal or state listed rare species is found it will be marked in the field for protection and a CNDDDB form will be completed and submitted to the County Parks. Minimal activity will occur in occupied habitat of CS and MB during larval development and flight. These areas will be flagged for avoidance.
- Use only spot treatment as possible (both foliar and cut-stump treatment) for herbicide application. Cut-stump application is preferred over foliar application which often has associated drift of herbicide. Herbicide use will be limited during butterfly flight and larval development seasons near the restoration areas and any known occupied habitat.
- Contractor will contact SMCP staff if unique or extenuating situation occurs with covered species.

B.2.5 Best Management Practices

Herbicides will be diluted with water as necessary in a backpack sprayer tank so that the resulting mixture is the proper concentration, and surfactant will be added if it is not already present in the formulation to assure that the herbicide remains in contact with the target plant. A dye will be added so that the applicator can detect which plants have been sprayed. This allows for effective control and prevents over-application.

The herbicides to be used are regulated by the U.S. Environmental Protection Agency and are approved for use by the California Department of Pesticide Regulations. Herbicides must be applied by contractors that are licensed and certified by the State, and in accordance with herbicide label directions and precautions. Application must also be in compliance with applicable Federal and State laws and regulations. A licensed pest control advisor must approve the elements of this plan that describe herbicide application.

Herbicide application will be restricted during certain adverse weather conditions; such as rain or wind. Herbicide applications will not be made during periods of moderate or heavy rainfall. Foliar applications are effective in light mist; however, measurable rainfall that creates leaf runoff will wash the herbicide off the target species. If foliar applications are interrupted by unexpected rainfall, the treatment will not resume until the rain ends and active leaf runoff has ceased. Vegetation should be dry before foliar application is re-initiated.

Excessive wind (greater than 5 mph) during foliar applications can cause herbicide to drift and damage desirable vegetation. To minimize off-target drift, the applicator will comply with the following restrictions:

- Herbicide will not be applied if the wind speed is in excess of 5 mph.
- During periods of light wind the applicator will periodically observe the application of the foliar treatment to insure that there is no significant movement or drift of the herbicide onto non-target plants. The use of a dye assists in determining the exact location of application.

- If the applicator can see the herbicide moving off target, the application will immediately stop until the wind has subsided enough to permit further application

A more detailed schedule of treatments is located in Chapter 6.B – Proposed Scope.

C. Restoration Techniques and Actions

Restoration is planned for areas that are likely to respond well to management of invasives. Restoration outplantings and seeding should be considered once treated areas are stabilized and invasive seed banks have been flushed (likely years 2-5). We recommend dedicating all restoration funding to parcels 1 and 2 because they are the large habitat areas which have shown to respond to management. Parcel 3 is a small parcel in the Carter-Martin area that has some potential, but only if the surrounding landscape is treated with the same intensity. Since that is beyond the scope of this project, we recommend minimizing restoration spending in parcel 3, although some invasives management should proceed.

We recommend that Mission Blue Nursery (operated by San Bruno Mountain Watch) is the preferred vendor for plant material and growing since they already collect and grow local plants appropriate for restoration. Additionally, restoration implementation could be completed as service-based projects which could be co-led by MBN and a knowledgeable professional or County Parks staff.

A total restoration budget of \$200,000 was allocated to allow for both restoration action and monitoring to occur on-site. The restoration actions in the first years should be a mixed of tried and true techniques (e.g. scrub removal) with novel pilot techniques (e.g. direct seeding with lupine seeds in disturbed area). Conducting pilot studies early will allow for more time to refine and implement these techniques if they prove valuable for restoration.

It is recommended that site-specific annual restoration projects/pilots/etc. be vetted every year (1-2 years in advance) so that staff and materials can be prepared for the restoration sites based on changing annual needs.

C.1. Parcel 1: Wax Myrtle Ravine Restoration Area Actions

- a. Multiple year reduction of north coastal scrub species incompatible with Silverbush lupine vegetation (including coyote brush, poison oak, toyon, California sagebrush and others.)
 - i. Including creating/connecting high quality habitat on south slopes with east facing slopes (which are currently much more scrub dominated)
 - ii. Tiered in concentric circles moving outward from core
- b. Increase in viola cover with trial small scale transplants/cores where hardy remnant populations exist. Conduct mowing experiment in known viola area and visually/quantitatively monitor for increased density/expansion of extent of viola polygon. Trial transplants will be conducted in spring during active growing season for viola. Other experiments with weeding, seed stratification, etc. can be considered as appropriate.

- c. Increase in *Lupinus* spp. using three techniques in the restoration area (WMR-R1) (consider *L. formosus* provisionally)
 - i. Outplanting requiring coordination with Mission Blue Nursery (MBN) for growing target plants for projects.
 - ii. Direct seeding into bare ground – including seed augmentation at MBN from a diversity of plants collected in various areas across the San Bruno Mountains.
 - iii. Scraping areas of weedy ground and seeding with lupine and other nectar plants.
- d. Increase habitat for other rare plants: *Iris longipetala* (IRILON) and *Erysimum franciscanum* (ERYFRA).
 - i. Direct seeding trials and transplanting rhizomes IRILON over the course of two years. We recommend WMR-R2 since it is a cooler, wetter restoration slope than WMR-R1.
 - ii. Direct seeding trials for ERYFRA in specific area with WMR-R1 and/or R2.
- e. Observation of MB and CS in restoration area (egg surveys for MB, adult for CS) as allowed. This may be a good place for volunteer input/citizen science to occur, as possible.

C.2. Parcel 2: West of Quarry Restoration Area Restoration

- a. Multiple year reduction of north coastal scrub species incompatible with Silverbush lupine vegetation (including coyote brush, poison oak, toyon, California sagebrush and others.)
 - 1. Including creating/connecting high quality habitat on south slopes with north facing slopes (which are currently much more scrub dominated)
 - 2. Tiered in concentric circles moving outward from core
- b. Increase in viola cover with trial small scale transplants/cores where hardy remnant populations exist. Conduct mowing experiment in known viola area and visually/quantitatively monitor for increased density/expansion of extent of viola polygon. Trial transplants will be conducted in spring during active growing season for viola. Other experiments with weeding, seed stratification, etc. can be considered as appropriate.
- c. Increase in *Lupinus* spp. (consider *L. formosus* and *L. variicolor* provisionally)
 - 1. Outplanting
 - 2. Direct seeding into bare ground
 - 3. Partially scraped bare ground seeding
- d. Increase habitat for other rare plants: *Arabis blepharophylla* (ARABLE) and *Arctostaphylos uva-ursi forma leobreweri* (ARCUVALEO)
 - 1. Expansion of *Arabis blepharophylla* (Coast rock cress) utilizing seeding experiments on appropriate north facing rocky slopes
 - 2. Trial outplanting of 10 cuttings from Leobrewer's manzanita (*Arctostaphylos uvaursi forma leobreweri*) in appropriate rock outcrops on ridge (See

photopoints in parcel 2 (Figure 10, next page) as potential areas for introduction/outplanting of cuttings). Cuttings can be both rooted first and some be simply directly outplanted as cuttings in order to assess two different restoration techniques.

C.3. Parcel 3: Carter-Martin Area Restoration No restoration is recommended for this parcel.

D. Monitoring Techniques and Success Criteria

Monitoring for this project must be relevant and useful for future management and restoration work. We recommend monitoring is only as complicated as it needs to be; the simpler the monitoring is, the easier it is to determine whether a project is successful. We will monitor for a) reduction in target non-native plants using photopoints and frequency monitoring along a transect, b) increase in target vegetation (silverbush lupine vegetation) using a line transect, c) an increase in viola density using a wandering transect, d) establishment of nursery plants or direct seeding trials using census methods, and e) any other pilot study that needs quantitative results.

D.1. Monitoring Techniques

Our monitoring recommendations are as follows:

- a. Establish photopoints for sample invasives control area (Figure 10). Photopoints should be taken at least once a year in April. A second photograph can be opportunistically taken during other seasons. Photopoints will be marked with T post mounted with a bracket for easy relocation. The T-post installation will be temporary. Data/Photographs will be compared side-by-side in subsequent reports.
 - a. St. John's wort polygon (parcel 1) – SJW will photograph the St. John's Wort population from the bottom of the hill in a northward direction.
 - b. Eucalyptus edge at interface of treatment/non-treatment area (parcel 1) – EUC will photograph the edge of the Eucalyptus grove in parcel 1 where some sapling removal will occur. Photo will be take along on the edge in an eastward direction.
 - c. Silverbush lupine scrub restoration area (parcel 1) – WMR-R1 will photograph changes in this restoration area, direction is aligned with the transect WMRR1.
 - d. Coastal prairie restoration (parcel 2) – WQR-1 will photograph from the bottom (lower end) of the WQR-1 transect up along the transect in a southern direction.
 - e. Manzanita restoration trial (parcel 2) – MAN will photograph the proposed relocation area for the manzanita trial.
 - f. Establish a permanent starting point on the upper edge of the current viola polygon location in parcel 1. From this point, annually conduct monitoring in

April-May (when viola leaves are fully formed) using a wandering transect (see Elzinga for method). This method was outlined in the 30-Year HCP Review (Weiss et al. 2015). During the course of this management plan if County Parks determines a more appropriate monitoring technique for viola with the same monitoring and reporting time requirements, that new technique will be integrated into the viola monitoring proposed in this plan.

- b. Survivorship of nursery plantings. Census all installed nursery plants for survivorship one year after installation. If plants are installed in November 2016, then monitoring should be conducted an appropriate date November 2017 thru April 2018 when plant survivorship can be accurately determined.

Proposed McKesson Restoration Areas: Monitoring Transects and Photopoints

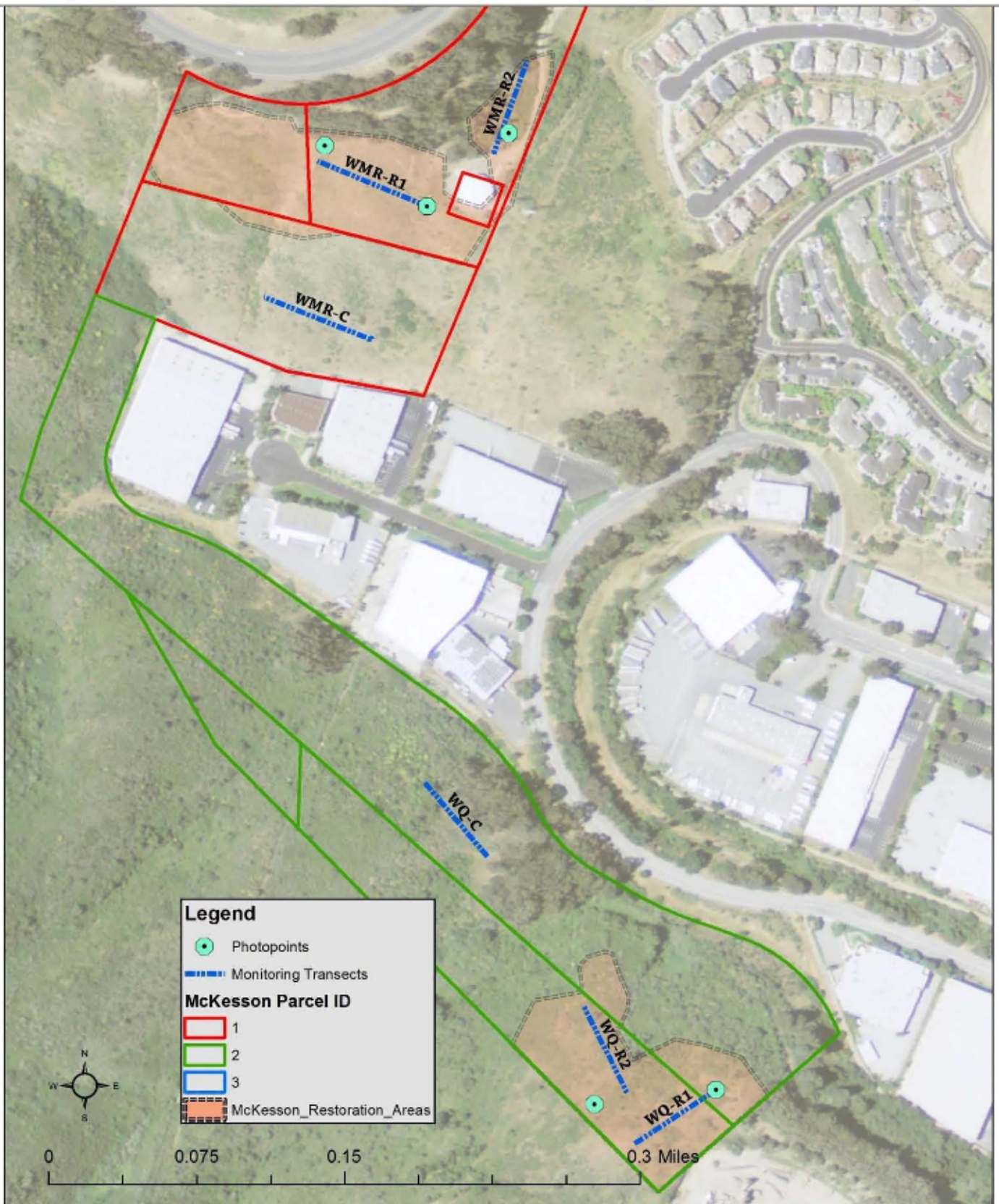


FIGURE 10: MONITORING TRANSECT AND PHOTOPOINT LOCATION

- c. Install semi-permanent 100 meter transects for line transects in restoration areas and in control areas. Transects will be marked with rebar, capped with OSHA approved top cap (Figure 10). Data will be analyzed per transect using a paired ttest, comparing pre-treatment years to post-treatment years.
 - a. 2 restoration areas, 1 control (parcel 1). There are two experimental transects, one along the eucalyptus treatment edge (WMR-R2), and one in the middle of an area slated to be restored to lupine scrub (WMR-R1). The control transect is expected to receive some general maintenance, but no directed restoration effort (WMR-C).
 - b. 2 restoration areas, 1 control (parcel 2). There are two experimental transects, both in areas of recent scrub encroachment of grasslands (WQ-R1 and WQ-R2). The control transect is expected to receive some general maintenance, located near an area of a historic *Lupinus formosus* population, but no directed restoration effort (WQ-C).
 - c. Data collection will follow the line transect protocol outlined by Elzinga et al. (Figure 11). Minimum recording unit will be 0.2 meters allowing for smaller plants to be included in the results. Transect length for all transects is 100 meter. Vegetation/Bare ground/Litter that is dominant will be recorded. Top hit, or highest canopy vegetation is recorded.
- d. Install transects (location to be determined with WCW staff) in non-native plant areas. These transects should be in areas to be treated and we recommend a simple frequency analysis along a belt transect.

MEASURING AND MONITORING PLANT POPULATIONS

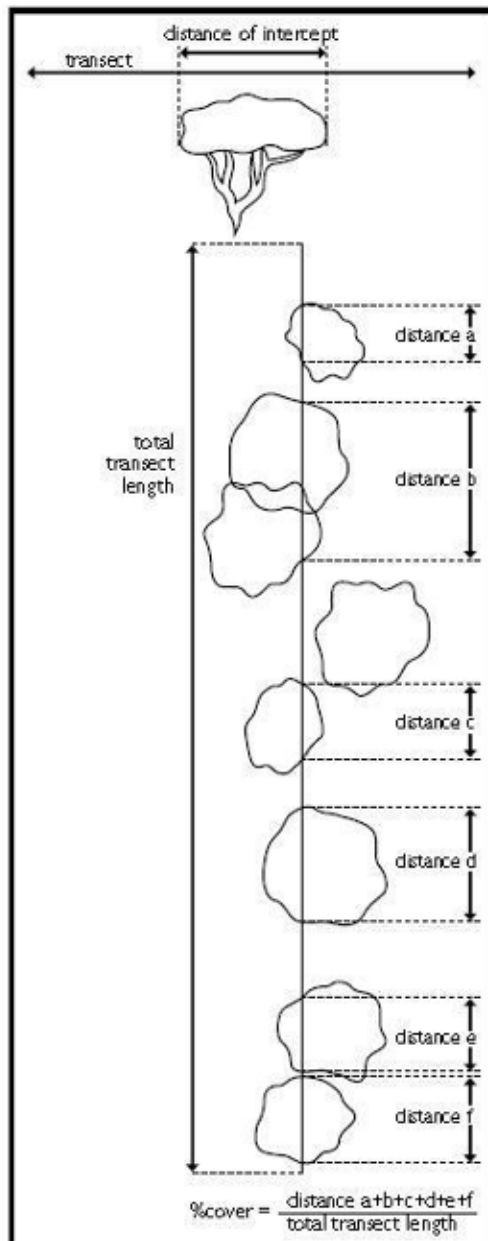


FIGURE 8.9. Line intercept method of measuring cover for a single shrub species.

b. Line intercepts

Canopy cover is measured along a line intercept transect by noting the point along the tape where the canopy begins and the point at which it ends (Figure 8.9). When these intercepts are added, and then divided by the total line length, the result is a percent cover for that species along the transect. Line intercept techniques are effective for species with dense canopies, such as some shrubs and matted plants. Line intercept is more difficult to use for plants with lacy or narrow canopies, such as grasses and some forbs and shrubs, because of the large number of small interceptions requiring evaluation.

Few plants form complete canopies, lacking any gaps. Typical gaps are formed by dead centers in bunchgrasses, fractured canopies in matted plants, gaps between blades of grass, and gaps between branches of shrubs. One approach for dealing with gaps along line intercepts is to measure small increments one at a time (such as a 1 cm distance along the tape). This approach forces the observer to evaluate each centimeter and reduces errors caused by sloppiness. It is also very time-consuming. Alternatively, the observer can assume a closed canopy until the gap exceeds a predetermined width; Bonham (1989) suggests 2 cm. In practice, observers often treat gaps differently when sampling line intercepts; thus, gap rules must be clearly documented in the description of the sampling methodology to ensure consistency among observers.

Another problem with line intercept is the potential for observer bias because the sighting line is not perpendicular to the tape or plumb. One option is to suspend the tape over the vegetation and use a plumb bob to locate canopy starts and stops. For overhead vegetation, a pole with a level can be used. The most accurate method for locating canopy boundaries of both low and overhead vegetation is to use some type of optical sighting device (described under points, below).

A final problem with line intercept is that repeatable measures are difficult to achieve if the wind is blowing. Not only is there the problem of trying to locate the intersection of the tape with a moving target, there is also the problem of the tape bowing in the wind, and of the vegetation laying at an angle and presenting a larger surface area than would be available under still conditions.

- e. Annually record population count, size, and plant condition information (as pertinent) for RTE plant reintroductions/introductions in permanent plots delineated with rebar at 4 corners. Reintroduction plots will be permanently established plots in mesoclimates/microclimates where certain RTE would likely occur. These areas will be located and delineated when plants and seed are available. Annually, we recommend collecting the following data: 1. # plants surviving 2. # plants reproducing – showing flowers or fruits at time of survey, 3. general habitat conditions or notes.

D.2. Success Criteria

This plan is designed towards creating grassland habitat with host plants for covered butterflies. Habitat goals are to maintain vegetation that is classified as grassland, coastal prairie, or lupine scrub. The overarching restoration goal is to reduce woody vegetation that outcompetes host plants and causes succession. The following 5 year goals are recommended. Both quantitative and qualitative monitoring results should be used to determine whether goals are met.

D.2.1 Measureable Criteria and Goals for Restoration Areas

- A. 90% reduction of invasive trees, shrubs and forbs after 5 years. Non native grasses are exempt.
- B. Minimum 40% survivorship of all nursery plantings one year after installation. Desired establishment is 60% or greater. If less than 25% establishment is observed, outplanting effort should be reviewed and revised. If outplanting efforts are not able to maintain 40% survivorship after the second growing year at any given restoration site, this technique will be revised and is subject to replacement with direct seeding/hydroseeding/other techniques.
- C. 70% reduction of native scrub cover in restoration areas after 5 years on all slopes treated. This allows for leaving/not restoring patches of habitat that continue to be regularly reinvaded, are not responding to treatment as expected, or have value as habitat and should be left alone.
- D. Positive MB egg surveys on new lupines in restoration areas
- E. Increase in extent/density of viola, 20% increase in cover in localized area as measured by the wandering transect over 20 meters.
- F. Increase in extent/density of target rare plants (ARABLE, IRILON, ARCUVALEO and ERYFRA) as recorded in transplanting/seeding trials.
- G. This project will utilize adaptive management – assessing results on years 1, 3, and 5 and adjusting the work plan/strategy as needed to improve results.

Contractors will provide a request to County Parks to relax criteria in the event that drought is anticipated to impact ability to meet success criteria, however, the determination to relax criteria is at County Parks' discretion.

VI. Proposed Budget and Scope of Services

A. Scope of Services

This scope of services is to cover tasks to implement an Adaptive Vegetation Management Plan for the treatment of invasive plants and endangered butterfly habitat restoration of McKesson Corporation, San Mateo Parcels One, Two, and Three on San Bruno Mountain. West Coast Wildlands, Inc. (The contractor) shall be responsible for completing the following tasks:

Task 1. 5 Year Adaptive Vegetation Management Plan for the treatment of invasive plants and endangered butterfly habitat restoration

Contractor will develop a 5-year Adaptive Management and Restoration Plan (AMRP) for the McKesson Corporation San Mateo County Parcels One, Two, and Three that will specify treatment methods, materials, timing and budget for each Parcel. The Plan will be submitted to the McKesson Corporation, San Mateo County Parks Department and the San Bruno Mountain Technical Advisory Committee for approval prior to implementation.

Task 2. Project Implementation

Contractor shall work with and provide technical expertise and guidance to McKesson Corporation to implement the Vegetation Management and Restoration Plan as agreed upon in Task 1. This includes:

- Implement and Monitor the 5 Year Adaptive Management and Restoration Plan
 - Follow Best Management Practices surrounding Threatened and Endangered Species
- Follow Guidelines for Restoration as outlined in the 2007 San Bruno Mountain Habitat Management Plan
- Submit Sight Activity Review application to San Mateo County Park Department
 - Map treatment Parcels for weed species and tree removal
 - Restore weed removal ground-disturbed sites in Parcels 1 and 2 with native plants from Mission Blue Nursery
 - Map Restoration areas within Parcels One and Two and monitor the native plant percent survival rate.
 - Follow all State and County Herbicide and Integrated Pest Management (IPM) Requirements
 - Acquire and supply to the recommendations for herbicide application from a state-licensed Pest Control Advisor
 - Monitor each application for treatment efficacy and adapt strategy as needed to meet success criteria. Since the annual weather is highly variable, and greatly influences restoration success, adaptive management should be initiated after 2 years a certain technique does not meet success criteria. Adaptive management use is under the discretion of the County Parks Department.

Task 3. Monitor Removal and Treatment of Listed Weeds Species in Parcels One, Two and Three

Contractor will treat listed weed species within Parcel 1 and remove weeds along the inner border of Parcel 2 to be hauled offsite. The Parcels 1 and 2 upland weed species will be treated with herbicides.

Task 4. Implement and Monitor Butterfly Habitat Restoration of the Parcel Two

Contractor will recommend a plant list with approximate numbers for propagation to Mission Blue Nursery staff. Recommendation list should be submitted as early as possible to allow for collection of seed and growing of plants, typically 1-1.5 years in advance. The first year will likely have a shorter time frame and turnaround for the nursery.

Native species will be outplanted within the ground disturbed weed removal site at the eastern and northern margin of Parcel 2. Contractor will provide plants from the Mission Blue Nursery in Brisbane, CA. The Restoration will also include weed management and watering during dry periods

Task 5. Monitor Removal and Treatment of Eucalyptus grove in Parcel 1

Contractor will cut, chip and haul designated Eucalyptus trees within Parcel 1 followed by treatment of all stumps. Monitor removal of trees and protect surrounding biological resources.

Task 6. Implement and Monitor Butterfly Habitat Restoration of the Parcel 1 Erosion Repair

Contractor will set up and outplant native species within the ground disturbed erosion repair site at the western margin of Parcel 1. Contractor will provide plants from the Mission Blue Nursery in Brisbane, CA. The Restoration will also include weed management and watering during dry periods.

Task 7. Develop Assessment Protocols

Contractor will set up and conduct assessments of each treatment method over the course of each year's Treatment Plan to measure the effects on weed species reduction as well as certain native species. Assessments should be consistent from year to year in terms of timing and methodology. Contractor will provide an annual summary of these assessments to County Parks staff in a format (typically Excel format) that will build on existing data collected from previous years. All mapped polygon shapefiles should also be provided to County Parks. Including the ones used in this plan as baseline data. Corresponding excel spreadsheets should be included if the shapefiles lack columns with individual species and infestation level by species.

B. Budget Overview

The proposed budget for all activities is \$499,000 over the course of 5 years. Total spending is roughly divided into 9 categories. Administrative costs are included as a percentage of each budget item (Table 2).

C. Budget Details

Table 2: Proposed Methods, Materials, Budget and Timeline

TASK	TASK LEAD/ GOAL	MATERIALS/DELIVERABLES	TOTAL BUDGET	ESTIMATED TIMELINE
1. Submit 5 Year AMRP (RIMP)	West Coast Wildlands, Inc Draft & Final Plan Approval by Habitat Manager with input from TAC	McKesson Corp, San Mateo County Parcels 1, 2 and 3 RIMP document	\$15,000.00	October 1, 2016
2. Weed removal and Management of Parcels 1, 2, and 3	West Coast Wildlands, Inc Tables 1-10 weed control and annual monitoring	Hand, Herbicide and mechanical equipment	\$199,774.00	Fall 2016 through Spring 2021
3. Habitat Restoration Parcels 1 and 2	Mission Blue Nursery for plant growing (or agencies/ non-profits, other nursery approved by County Parks) Complete habitat restoration tasks.	Native Plants TBD per site w/watering. Outplanting of native grasses & Forbs in ground disturbed areas, initiation of pilot projects. Implementation of most successful techniques in later years. Restoration professional, County Parks staff input.	\$170,000.00	Fall 2016 through Fall 2020
4. Eucalyptus Removal by Contractor Parcel 1	WCW, Inc. Cut specified trees, haul offsite and/or chip materials onsite	Contractor's tree removal equipment	\$15,000.00	Fall 2016 or Spring 2017

5. Eucalyptus Removal Monitoring and Biological Resources fencing Parcel 1	Restoration professional or ecologist. Establish a Biological Resource Boundary for Parcel 1 Eucalyptus removal	Temporary Fencing Material and a Biologist onsite to Monitor all activity	\$2,000.00	Fall 2016 or Spring 2017
6. Habitat Monitoring and Restoration reporting	Annual monitoring and reporting for SBMHCP	Restoration professional/ ecological monitor to provide GIS data and XLS form data to Co. and WCW, Inc. (\$6,000/year)	\$30,000.00	Fall 2016 through Fall 2020 Annually summary is due Dec. 1 annually for inclusion in the SBMHCP annual report.
7. Assessment Protocols	WCW, Inc. Monitor and document during each visit at each site and twice a year for weed reduction and outplanting results. Submit Annual report	Dailies with site maps and treatment data. Use GPS and photo stations within the work sites	\$15,000.00	Fall 2016 through Spring 2021
8. Implement AVMP	WCW, Inc. Administration of the AVMP for 5 Years	Submit Semi Annual Budgets to McKesson Corporation Annual Summary	\$32,000.00	Submit Budgets during the Fall and Spring of each year Annually summary is due Dec. 1 annually for inclusion in the SBMHCP annual report.
9. Incidental Expenses	Additional budget for unforeseen project expenses: ca. 4% of total budget		\$20,226.00	
		TOTAL	\$499,000.00	Fall 2016 - Spring 2021

D. Deliverables

Daily work sheets. The daily work sheet will list: labor hours, herbicide names and rates, and adjuvants used. The sites treated shall be identified on the back of the daily worksheets that have an aerial photo of the area, treatment polygons and their MAPID number. The daily worksheets shall be turned into District staff at the end of each field day.

Work report table. The work report table lists all sites, dates, labor totals and area and shall be turned in to District staff at the end of the project.

Polygon Treatment Maps. The treated sites will be clearly delineated on a map and turned in to District staff at the end of the project. County Parks will require GIS shape files to be submitted annually, including the baseline mapping that went into developing this plan.

Annual Treatment and Restoration Summary associated with each parcel. The data and summary results of the assessment protocol from Task 4 will be turned in to McKesson Corporation and County Parks at the end of each calendar year. Data sheets and data associated with monitoring to County Parks.

2016 Fall Application Costs

Table 1. Proposed work-scope and costs for habitat maintenance and enhancement (exotic species control) within the dedication parcels. Site locations are shown in Figures 1-3. 2014 rates for hand labor, spray labor, and herbicides are cited below.

Site Name	Exotic species ¹	Hand Control/ cut stump (days)	Spray Rig (days)	Backpack (days)	Herbicide Mix (Gal)	
					Garlon 4 Ultra	Roundup Custom
1. Parcel 1 (20.93 Acres)	B,F,G, E	3.0 (8160)	1.0 (2920)	2.0 (5840)	100 (357.00)	100 (250.00)
2. Parcel 2 (27.43 Acres)	F,G,T,W O,E	6.0 (16320)	2.0 (5840)	3.0 (8160)	200 (750.00)	100 (250.00)
3. Parcel 3 (2200sq.ft)	B,F,PG, T,W	1.0 (2720)		1.0 (2720)	25 (93.75)	25 (62.50)

Totals		\$27,200.00	\$8,760.00	\$16,320.00	\$1,218.75	\$562.50
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Total Cost	\$54,061.25					
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Exotic pest plant control rates for 2016

Consulting	\$100/hr
GIS	\$75/hr
Graphics	\$75/hr
Spray Supervisor (SS)	\$65/hr
Field Supervisor (FS)	\$65/hr
Spray/Hand Crew (SC)	\$55/hr
Field Crew (FC)	\$55/hr
Day Crew 8hr (1FS &5FC)	\$2720/day (Includes hand tools/chains saws)
Spray Crew 8hr (1FS & 5FC)	\$2920/day w/ Spray Truck (\$200) plus Herbicide

1. Exotic Species

B=Broom, F=Fennel, E=Eucs, HB= Himalaya berry, O=Oxalis pes-caprea, PG= Pampas grass, PH=Poison Hemlock, T=Italian Thistle, W=Wild radish, G=Gorse

2017 Spring Application Costs

Table 2. Proposed work-scope and costs for habitat maintenance and enhancement (exotic species control) within the dedication parcels. Site locations are shown in Figures 1-3. 2016 rates for hand labor, spray labor, and herbicides are cited below.

Site Name	Exotic species ¹	Hand Control/ cut stump (days)	Spray Rig (days)	Backpack (days)	Herbicide Mix (Gal)	
					Garlon 4 Ultra	Roundup Custom

1. Parcel 1 (20.93 Acres)	B,F,G, E	1.0 (2720)	2.0 (5840)	1.0 (2720)	100 (375.00)	100 (250.00)
2. Parcel 2 (27.43 Acres)	F,G,T,W O,E	2.0 (5440)	1.0 (2920)	2.0 (5440)	100 (375.00)	100 (250.00)
3. Parcel 3 (2200sq.ft)	B,F,PG, T,W			0.25 (680)	25 (93.75)	25 (62.50)
Totals		\$8,160.00	\$8,760.00	\$8,840.00	\$843.75	\$562.50

Total Cost	\$27,166.25
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Exotic pest plant control rates for 2017

Consulting	\$100/hr
GIS	\$75/hr
Graphics	\$75/hr
Spray Supervisor (SS)	\$65/hr
Field Supervisor (FS)	\$65/hr
Spray/Hand Crew (SC)	\$55/hr
Field Crew (FC)	\$55/hr
Day Crew 8hr (1FS &5FC)	\$2720/day (Includes hand tools/chains saws)
Spray Crew 8hr (1FS & 5FC)	\$2920/day w/ Spray Truck (\$200) plus Herbicide

1. Exotic Species

B=Broom, F=Fennel, E=Eucs, HB= Himalaya berry, O=Oxalis pes-caprea, PG= Pampas grass, PH=Poison Hemlock, T=Italian Thistle, W=Wild radish, G=Gorse

2017 Fall Application Costs

Table 3. Proposed work-scope and costs for habitat maintenance and enhancement (exotic species control) within the dedication parcels. Site locations are shown in Figures 1-3. 2017 rates for hand labor, spray labor, and herbicides are cited below.

Site Name	Exotic species ¹	Hand Control/ cut stump (days)	Spray Rig (days)	Backpack (days)	Herbicide Mix (Gal)	
					Garlon 4 Ultra	Roundup Custom
1. Parcel 1 (20.93 Acres)	B,F,G, E	1.0 (2720)		2.0 (5440)	50 (187.50)	50 (125.00)
2. Parcel 2 (27.43 Acres)	F,G,T,W O,E	2.0 (5440)		3.0 (8160)	100 (375.00)	100 (250.00)
3. Parcel 3 (2200sq.ft)	B,F,PG, T,W			0.25 (680)	25 (93.75)	25 (62.50)
Totals		\$8,160.00		\$14,280.00	\$626.25	\$437.50

Total Cost	\$23,503.75
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Exotic pest plant control rates for 2017

Consulting	\$100/hr
GIS	\$75/hr
Graphics	\$75/hr
Spray Supervisor (SS)	\$65/hr
Field Supervisor (FS)	\$65/hr
Spray/Hand Crew (SC)	\$55/hr

Field Crew (FC)	\$55/hr
Day Crew 8hr (1FS &5FC)	\$2720/day (Includes hand tools/chains saws)
Spray Crew 8hr (1FS & 5FC)	\$2920/day w/ Spray Truck (\$200) plus Herbicide

1. Exotic Species

B=Broom, F=Fennel, E=Eucs, HB= Himalaya berry, O=Oxalis pes-caprea, PG= Pampas grass, PH=Poison Hemlock, T=Italian Thistle, W=Wild radish, G=Gorse

2018 Spring Application Costs

Table 4. Proposed work-scope and costs for habitat maintenance and enhancement (exotic species control) within the dedication parcels. Site locations are shown in Figures 1-3. 2018 rates for hand labor, spray labor, and herbicides are cited below.

Site Name	Exotic species 1	Hand Control/ cut stump (days)	Spray Rig (days)	Backpack (days)	Herbicide Mix (Gal)	
					Garlon 4 Ultra	Roundup Custom
1. Parcel 1 (20.93 Acres)	B,F,G, E	1.0 (2720)	1.0 (2920)	1.0 (2720)	50 (187.50)	50 (125.00)
2. Parcel 2 (27.43 Acres)	F,G,T,W O,E	1.0 (2720)	1.0 (2920)	2.0 (5840)	100 (375.00)	100 (250.00)
3. Parcel 3 (2200sq.ft)	B,F,PG, T,W			0.25 (680)	25 (93.75)	25 (62.50)
Totals		\$5,440.00	\$5,840.00	8,840.00	\$656.25	\$437.50

Total Cost	\$21,213.75
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Exotic pest plant control rates for 2018

Consulting	\$100/hr
GIS	\$75/hr
Graphics	\$75/hr
Spray Supervisor (SS)	\$65/hr
Field Supervisor (FS)	\$65/hr
Spray/Hand Crew (SC)	\$55/hr
Field Crew (FC)	\$55/hr
Day Crew 8hr (1FS &5FC)	\$2720/day (Includes hand tools/chains saws)
Spray Crew 8hr (1FS & 5FC)	\$2920/day w/ Spray Truck (\$200) plus Herbicide

1. Exotic Species

B=Broom, F=Fennel, E=Eucs, HB= Himalaya berry, O=Oxalis pes-caprea, PG= Pampas grass, PH=Poison Hemlock, T=Italian Thistle, W=Wild radish, G=Gorse

2018 Fall Application Costs

Table 5. Proposed work-scope and costs for habitat maintenance and enhancement (exotic species control) within the dedication parcels. Site locations are shown in Figures 1-3. 2016 rates for hand labor, spray labor, and herbicides are cited below.

Site Name & APN Number	Exotic species ¹	Hand Control/ cut stump (days)	Spray Rig (days)	Backpack (days)	Herbicide Mix (Gal)	
					Garlon 4 Ultra	Roundup Custom
1. Parcel 1 (20.93 Acres)	B,F,G	1.0 (2720)		1.0 (2720)	50 (187.50)	50 (125.00)
2. Parcel 2 (27.43 Acres)	F,G,T,W O,E	1.0 (2720)		2.0 (5840)	100 (375.00)	100 (250.00)
3. Parcel 3 (2200sq.ft)	B,F,PG, T,W			0.25 (680)	25 (93.75)	25 (62.50)

Totals		\$5,440.00		\$8,840.00	\$656.75	\$437.50
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Total Cost	\$15,373.75					
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Exotic pest plant control rates for 2018

Consulting	\$100/hr
GIS	\$75/hr
Graphics	\$75/hr
Spray Supervisor (SS)	\$65/hr
Field Supervisor (FS)	\$65/hr
Spray/Hand Crew (SC)	\$55/hr
Field Crew (FC)	\$55/hr
Day Crew 8hr (1FS & 5FC)	\$2720/day (Includes hand tools/chains saws)
Spray Crew 8hr (1FS & 5FC)	\$2920/day w/ Spray Truck (\$200) plus Herbicide

1. Exotic Species

B=Broom, F=Fennel, E=Eucs, HB= Himalaya berry, O=Oxalis pes-caprea, PG= Pampas grass, PH=Poison Hemlock, T=Italian Thistle, W=Wild radish, G=Gorse

2019 Spring Application Costs

Table 6. Proposed work-scope and costs for habitat maintenance and enhancement (exotic species control) within the dedication parcels. Site locations are shown in Figures 1-3. 2017 rates for hand labor, spray labor, and herbicides are cited below.

Site Name & APN Number	Exotic species ¹	Hand Control/ cut stump (days)	Spray Rig (days)	Backpack (days)	Herbicide Mix (Gal)	
					Garlon 4 Ultra	Roundup Custom

1. Parcel 1 (20.93 Acres)	B,F,G	1.0 (2720)		1.0 (2720)	50 (187.50)	50 (125.00)
2. Parcel 2 (27.43 Acres)	F,G,T,W O,E	1.0 (2720)		2.0 (5840)	100 (375.00)	100 (250.00)
3. Parcel 3 (2200sq.ft)	B,F,PG, T,W			0.25 (680)	25 (93.75)	25 (62.50)
Totals		\$5,440.00		\$8,840.00	\$656.75	\$437.50

Total Cost	\$15,374.25
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Exotic pest plant control rates for 2019

Consulting	\$100/hr
GIS	\$75/hr
Graphics	\$75/hr
Spray Supervisor (SS)	\$65/hr
Field Supervisor (FS)	\$65/hr
Spray/Hand Crew (SC)	\$55/hr
Field Crew (FC)	\$55/hr
Day Crew 8hr (1FS & 5FC)	\$2720/day (Includes hand tools/chains saws)
Spray Crew 8hr (1FS & 5FC)	\$2920/day w/ Spray Truck (\$200) plus Herbicide

1. Exotic Species

B=Broom, F=Fennel, E=Eucs, HB= Himalaya berry, O=Oxalis pes-caprea, PG= Pampas grass, PH=Poison Hemlock, T=Italian Thistle, W=Wild radish, G=Gorse

2019 Fall Application Costs

Table 7. Proposed work-scope and costs for habitat maintenance and enhancement (exotic species control) within the dedication parcels. Site locations are shown in Figures 1-3. 2017 rates for hand labor, spray labor, and herbicides are cited below.

Site Name & APN Number	Exotic species ¹	Hand Control/ cut stump (days)	Spray Rig (days)	Backpack (days)	Herbicide Mix (Gal)	
					Garlon 4 Ultra	Roundup Custom
1. Parcel 1 (20.93 Acres)	B,F,G	1.0 (2720)		1.0 (2720)	50 (187.50)	50 (125.00)
2. Parcel 2 (27.43 Acres)	F,G,T,W O,E	1.0 (2720)		1.0 (2720)	100 (375.00)	100 (250.00)
3. Parcel 3 (2200sq.ft)	B,F,PG, T,W			0.25 (680)	25 (93.75)	25 (62.50)
Totals		\$5,440.00		\$6,120.00	\$656.75	\$437.50

Total Cost	\$12,654.25
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Exotic pest plant control rates for 2019

Consulting	\$100/hr
GIS	\$75/hr
Graphics	\$75/hr
Spray Supervisor (SS)	\$65/hr
Field Supervisor (FS)	\$65/hr
Spray/Hand Crew (SC)	\$55/hr

Field Crew (FC) \$55/hr
 Day Crew 8hr (1FS &5FC) \$2720/day (Includes hand tools/chains saws)
 Spray Crew 8hr (1FS & 5FC) \$2920/day w/ Spray Truck (\$200) plus Herbicide

1. Exotic Species

B=Broom, F=Fennel, E=Eucs, HB= Himalaya berry, O=Oxalis pes-caprea, PG= Pampas grass, PH=Poison Hemlock, T=Italian Thistle, W=Wild radish, G=Gorse

2020 Spring Application Costs

Table 8. Proposed work-scope and costs for habitat maintenance and enhancement (exotic species control) within the dedication parcels. Site locations are shown in Figures 1-3. 2018 rates for hand labor, spray labor, and herbicides are cited below.

Site Name & APN Number	Exotic species ¹	Hand Control/ cut stump (days)	Spray Rig (days)	Backpack (days)	Herbicide Mix (Gal)	
					Garlon 4 Ultra	Roundup Custom
1. Parcel 1 (20.93 Acres)	B,F,G	1.0 (2720)		1.0 (2720)	50 (187.50)	50 (125.00)
2. Parcel 2 (27.43 Acres)	F,G,T, W O,E	1.0 (2720)		2.0 (5840)	100 (375.00)	100 (250.00)
3. Parcel 3 (2200sq.ft)	B,F,PG, T,W			0.25 (680)	25 (93.75)	25 (62.50)
Totals		\$5,440.00		\$8,840.00	\$656.75	\$437.50

Total Cost	\$15,374.25
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Exotic pest plant control rates for 2020

Consulting	\$100/hr
GIS	\$75/tr
Graphics	\$75/tr
Spray Supervisor (SS)	\$65/tr
Field Supervisor (FS)	\$65/tr
Spray/Hand Crew (SC)	\$55/tr
Field Crew (FC)	\$55/tr
Day Crew 8hr (1FS &5FC)	\$2720/day (Includes hand tools/chains saws)
Spray Crew 8hr (1FS & 5FC)	\$2920/day w/ Spray Truck (\$200) plus Herbicide

1. Exotic Species

B=Broom, F=Fennel, E=Eucs, HB= Himalaya berry, O=Oxalis pes-caprea, PG= Pampas grass, PH=Poison Hemlock, T=Italian Thistle, W=Wild radish, G=Gorse

2020 Fall Application Costs

Table 9. Proposed work-scope and costs for habitat maintenance and enhancement (exotic species control) within the dedication parcels. Site locations are shown in Figures 1-3. 2018 rates for hand labor, spray labor, and herbicides are cited below.

Site Name	Exotic species ¹	Hand Control/ cut stump (days)	Spray Rig (days)	Backpack (days)	Herbicide Mix (Gal)	
					Garlon 4 Ultra	Roundup Custom
1. Parcel 1 (20.93 Acres)	B,F,G			1.0 (2720)	100 (375.00)	100 (250.00)
2. Parcel 2 (27.43 Acres)	F,G,T,W O,E			1.0 (2720)	100 (375.00)	100 (250.00)

3. Parcel 3 (2200sq.ft)	B,F,PG, T,W			0.25 (680)	25 (93.75)	25 (62.50)
Totals				\$6,120.00	\$843.75	\$562.50

Total Cost	\$7,526.25
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Exotic pest plant control rates for 2020

Consulting	\$100/hr
GIS	\$75/hr
Graphics	\$75/hr
Spray Supervisor (SS)	\$65/hr
Field Supervisor (FS)	\$65/hr
Spray/Hand Crew (SC)	\$55/hr
Field Crew (FC)	\$55/hr
Day Crew 8hr (1FS &5FC)	\$2720/day (Includes hand tools/chains saws)
Spray Crew 8hr (1FS & 5FC)	\$2920/day w/ Spray Truck (\$200) plus Herbicide

1. Exotic Species

B=Broom, F=Fennel, E=Eucs, HB= Himalaya berry, O=Oxalis pes-caprae, PG= Pampas grass, PH=Poison Hemlock, T=Italian Thistle, W=Wild radish, G=Gorse

2021 Spring Application Costs

Table 10. Proposed work-scope and costs for habitat maintenance and enhancement (exotic species control) within the dedication parcels. Site locations are shown in Figures 1-3. 2019 rates for hand labor, spray labor, and herbicides are cited below.

Site Name & APN Number	Exotic species ¹	Hand Control/ cut stump (days)	Spray Rig (days)	Backpack (days)	Herbicide Mix (Gal)	
					Garlon 4 Ultra	Roundup Custom

1. Parcel 1 (20.93 Acres)	B,F,G			1.0 (2720)	100 (375.00)	100 (250.00)
2. Parcel 2 (27.43 Acres)	F,G,T,W O,E			1.0 (2720)	100 (375.00)	100 (250.00)
3. Parcel 3 (2200sq.ft)	B,F,PG, T,W			0.25 (680)	25 (93.75)	25 (62.50)
Totals				\$6,120.00	\$843.75	\$562.50

Total Cost	\$7,526.25
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Grand Total (Tables 110)	\$199,774.00
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Exotic pest plant control rates for 2021

Consulting	\$100/hr
GIS	\$75/hr
Graphics	\$75/hr
Spray Supervisor (SS)	\$65/hr
Field Supervisor (FS)	\$65/hr
Spray/Hand Crew (SC)	\$55/hr
Field Crew (FC)	\$55/hr
Day Crew 8hr (1FS &5FC)	\$2720/day (Includes hand tools/chains saws)
Spray Crew 8hr (1FS & 5FC)	\$2920/day w/ Spray Truck (\$200) plus Herbicide

1. Exotic Species

B=Broom, F=Fennel, E=Eucs, HB= Himalaya berry, O=Oxalis pes-caprea, PG= Pampas grass, PH=Poison Hemlock, T=Italian Thistle, W=Wild radish, G=Gorse

VII. Conclusion

We are hopeful that this first RIMP will serve as a model to aid in efforts to restore and maintain critical resources within the SBMHCP area. We anticipate that this will be a living document which will incorporate the principles of adaptive management that will allow for the County of San Mateo and the contractor to make adjustments when they are necessary. The transfer of parcels 1, 2 and 3 will provide habitat for covered species and will reduce long term management and maintenance costs by carefully selecting invasive plant goals that can be met, while restoring native plant habitats that have been on the decline within the SBMHCP area.

VIII. References and Resources

Allshouse, D. and D. Nelson. 2016. (in preparation). *The Natural History of the San Bruno Mountains*. California Native Plant Society Press. Sacramento, CA.

County of San Mateo, 1982. *San Bruno Mountain Habitat Conservation Plan, Volume I and II*. Prepared by Thomas Reid Associates.

Dunn, C. P., Sharpe, D. M., Guntenspergen, G. R., Stearns, F., and Yang, Z. (1990), Methods for analyzing temporal changes in landscape pattern. In *Quantitative Methods Landscape Ecology* (M. G. Turner and R. H. Gardner, Eds.), Springer-Verlag, New York, pp. 173–198

Ekstrom, Julia A., and Susanne C. Moser. 2012. *Climate Change Impacts, Vulnerabilities, and Adaptation in the San Francisco Bay Area: A Synthesis of PIER Program Reports and Other Relevant Research*. California Energy Commission. Publication number: CEC-500-2012-071.

Elzinga, C. L., D. W. Salzer, and J. W. Willoughby. 1998. *Measuring & Monitoring Plant Populations*. BLM Technical Publication 1730-1.

Hall, Frederick C. 2001. *Photo point monitoring handbook: part A—field procedures*. Gen. Tech. Rep. PNWGTR-526. Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station. 48 p. 2 parts.

May and Associates. 2008. *Final Report San Bruno Mountain Gorse Removal Project*. Prepared for County of San Mateo Environmental Services Agency Parks and Recreation Department in association with Shelterbelt Builders.

McClintock, E., Reeberg, P., Knight, W. 1991. *A Flora of the San Bruno Mountains*. California Native Plant Society Press. Sacramento, CA.

Naumovich, L. 2015. *Serpentine Prairie Restoration Plan: 2015 Report*. Report prepared for the East Bay Regional Park District. Menlo Park, CA.

Ogden, E. J. A., and M. Rejmánek. 2005. Recovery of native plant communities after the control of a dominant invasive plant species, *Foeniculum vulgare*: Implications for management. *Biological Conservation* 125:427–439.

Sawyer, J. O., Keeler-Wolf, T. and J. M. Evens. 2009. *A Manual of California Vegetation*. CNPS. Sacramento, CA.

Society for Ecological Restoration, Science & Policy Working Group (SER-SPWG). 2004. SER International Primer on Restoration Ecology. Version 2, October, 2004, Washington, D.C.

Stromberg, M. R., J.D. Corbin, and C. M. D'Antonio. 2007. California Grasslands: Ecology and Management. University of California Press, Berkeley and Los Angeles, CA.

TRA Environmental Sciences (TRA), 2008, San Bruno Mountain Area Habitat Management Plan 2007: Prepared in support of the San Bruno Mountain Habitat Conservation Plan for the San Mateo County Parks Department; original version dated September 2007, revised March 2008.

Weiss, S.B., Naumovich L. and C. Niederer. 2015. Assessment of the past 30 years of habitat management and covered species monitoring associated with the San Bruno Mountain habitat conservation plan. Prepared for the San Mateo County Parks Department.

IX. Acknowledgements

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Ramona Arechiga, Mission Blue Nursery Staff, SBMHCP TAC, Doug Allshouse, David Nelson.

X. Appendices

Appendix A: Grassland Restoration Prioritization reproduced from Weiss et al. 2015

Please see next page.

Figure 6-1: 5200 East 200 Street, West of 400 East 100th Street and Central Expressway

Area	Area 1	Area 2	Area 3	Area 4	Area 5
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Figure 6-2: Aerial photograph of the study area with red boxes indicating the locations of the 100 study plots.

Appendix B: Preliminary Plant List

Preliminary filed surveys were conducted to document plant species found within the project area. List compiled from: 1. Naumovich and Forbert field survey date: Sept. 2, 2015, 2. SBMW restoration planting list, 3. WCW invasive plant management work.

McKesson PLANT LIST - list adapted from Allshouse, D. 2015

NON-NATIVE species are indicated by an I in the left-most column.

Occurrence Key: 3 - locally or sitewise dominant species forming stands that can be easily mapped, 2 - common on-site, but does not form notable, dense stands, 1-present in a few populations

Parcel							
	SCIENTIFIC NAME	1	2	3	COMMON NAME	FAMILY	CNPS
I	<i>Acacia dealbata</i>	1	1		silver wattle acacia	Fabaceae/Legume	
	<i>Acaena pinnatifida</i>	2	1		acaena	Rosaceae/Rose	
	<i>Achillia millefolium</i>	1	1		common yarrow	Asteraceae/Sunflower	
	<i>Acmispon glaber</i>		1		deerweed	Fabaceae/Legume	
	<i>Agrostis hallii</i>	1	2			Poaceae/Grass	
I	<i>Aira caryophyllea</i>		1		silvery hair grass	Poaceae/Grass	
I	<i>Anagallis arvensis</i>		1				
	<i>Artemisia californica</i>	3	1		coast sagebrush	Asteraceae/Sunflower	
	<i>Artemisia douglasiana</i>	1			CA mugwort	Asteraceae/Sunflower	
I	<i>Avena barbata</i>	2	2	1	slender wild oat	Poaceae/Grass	
	<i>Baccharis pilularis subsp. pilularis</i>	3	3	2	coyote brush/bush	Asteraceae/Sunflower	
I	<i>Briza maxima</i>	3	2	2	big quaking/rattlesnake grass	Poaceae/Grass	
I	<i>Briza minor</i>	1			little quaking grass	Poaceae/Grass	
	<i>Bromus carinatus</i>	2	1		CA brome	Poaceae/Grass	
I	<i>Bromus diandrus</i>	3	1		ripgut brome	Poaceae/Grass	
I	<i>Bromus hordeaceus</i>	2	1		soft chess	Poaceae/Grass	
I	<i>Carduus pycnocephalus subsp. pycnocephalus</i>	1	1	1	Italian thistle	Asteraceae/Sunflower	
I	<i>Carpobrotus edulis</i>	1			ice plant	Aizoaceae/Iceplant	
	<i>Ceanothus thrysiflorus</i>	2			blue blossom, CA lilac	Rhamnaceae/Buckthorn	
	<i>Centranthus ruber</i>			1	Jupiter's beard, valerian	Valerianaceae/Valerian	

	<i>Chlorogalum pomeridianum</i>	1	1		soap plant	Agavaceae/Century plant	
	<i>Clarkia rubicunda</i>		1		farewell-to-spring	Onagraceae/Evening Primrose	
I	<i>Cortaderia jubata</i>		1		pampas grass	Poaceae/Grass	
	<i>Cotoneaster francheti</i>		1		Franchet's cotoneaster	Rosaceae/Rose	
I	<i>Cotoneaster lacteus</i>		1		cotoneaster	Rosaceae/Rose	
	<i>Cotoneaster pannosus</i>	1		2	cotoneaster	Rosaceae/Rose	
I	<i>Cynosurus echinatus</i>	1			hedgehog dogtail	Poaceae/Grass	
I	<i>Cytisus striatus</i>	1	2		Portuguese broom	Fabaceae/Legume	
	<i>Dryopteris arguta</i>	1		1	coastal wood fern	Dryopteridaceae/Wood Fern	
	<i>Dudleya farinosa</i>	1			bluff lettuce	Crassulaceae/Stonecrop	
	<i>Elymus glaucus</i>	1			western rye grass	Juncaceae/Rush	
	<i>Epilobium brachycarpum</i>	1		1	willow-herb	Onagraceae/Evening Primrose	
	<i>Eriogonum latifolium</i>	2	1	1	coast buckwheat	Polygonaceae/Buckwheat	
	<i>Eriophyllum confertiflorum</i>		1		golden yarrow	Asteraceae/Sunflower	
I	<i>Erodium botrys</i>	2			long-beaked filaree	Geraniaceae/Geranium	
	<i>Eschscholzia californica</i>	1	1		CA poppy	Papaveraceae/Poppy	
	<i>Eucalyptus globulus</i>	3	3		blue-gum eucalyptus	Myrtaceae/Myrtle	
	<i>Festuca californica</i>	1			CA fescue	Poaceae/Grass	
I	<i>Festuca perennis</i>	1	1		perennial rye grass	Poaceae/Grass	
	<i>Festuca rubra</i>		1		red fescue	Poaceae/Grass	
I	<i>Foeniculum vulgare</i>	2		2	sweet fennel	Apiaceae/Carrot-Parsley	
	<i>Frangula californica</i>	1	1		CA coffeeberry	Rhamnaceae/Buckthorn	
I	<i>Genista monspessulana</i>	1		1	French broom	Fabaceae/Pea	
	<i>Grindelia hirsutula</i>	1			coast gumplant	Asteraceae/Sunflower	1B.2
I	<i>Helminthotheca echioides</i>	1			bristly ox tongue	Asteraceae/Sunflower	
	<i>Heracleum maximum</i>		1		cow parsnip	Apiaceae/Carrot-Parsley	
I	<i>Hesperocyparis macrocarpa</i>		3		Monterey cypress	Cupressaceae/Cypress	
	<i>Heteromeles arbutifolia</i>	2	2		toyon	Rosaceae/Rose	
	<i>Heterotheca sessiliflora subsp. bolanderi</i>	2	1		golden aster	Asteraceae/Sunflower	
	<i>Heuchera micrantha</i>				alum root	Saxifragaceae/Saxifrage	
I	<i>Hirschfeldia incana</i>	1	2	1	summer mustard	Brassicaceae/Mustard	
I	<i>Holcus lanatus</i>		1		velvet grass	Poaceae/Grass	

I	<i>Hypericum perforatum</i> subsp. <i>perforatum</i>	3			Klamath weed	Hypericaceae/St. John's Wort	
	<i>Iris douglasiana</i>	1			Douglas iris	Iridaceae/Iris	
	<i>Iris longipetala</i>		1		coast iris	Iridaceae/Iris	4.2
	<i>Juncus patens</i>		1		spreading rush	Juncaceae/Rush	
	<i>Koeleria macrantha</i>	1			June grass	Poaceae/Grass	
I	<i>Lactuca serriola</i>	1	1	1	prickly lettuce	Asteraceae/Sunflower	
	<i>Lathyrus vestitus</i>	1			hillside pea	Fabaceae/Pea	
	<i>Lonicera hispidula</i>		1		CA honeysuckle	Caprifoliaceae/Honeysuckle	
	<i>Lupinus albilfrons</i> var. <i>collinus</i>	3	2		silver bush lupine	Fabaceae/Legume	
	<i>Melica californica</i>	1			CA melic	Poaceae/Grass	
	<i>Mimulus aurantiacus</i>	1	2	1	sticky/bush monkey flower	Phrymaceae/Lopseed	
	<i>Monardella villosa</i> subsp. <i>villosa</i>	1			coyote mint	Lamiaceae/Mint	
	<i>Oemleria cerasiformis</i>		1		oso berry, Indian plum	Rosaceae/Rose	
I	<i>Phalaris minor</i>		1		Mediterranean canary grass	Poaceae/Grass	
I	<i>Pinus pinea</i>		1		Italian stone pine		
I	<i>Pinus radiata</i>	1	1		Monterey pine	Pinaceae/Pine	
I	<i>Plantago lanceolata</i>	2	2		English plantain	Plantaginaecae/Plantain	
	<i>Polypodium</i> <i>californicum</i>		1		CA polypody	Polypodiaceae/Polypody	
	<i>Prunus ilicifolia</i> subsp. <i>ilicifolia</i>		1		holly-leaved/Islais cherry	Rosaceae/Rose	
	<i>Pseudognaphalium</i> <i>californicum</i>	1	1	1	green everlasting	Asteraceae/Sunflower	
	<i>Pteridium aquilinum</i> var. <i>pubescens</i>	2	2		bracken fern	Dennstaedtiaceae/Bracken	
	<i>Quercus agrifolia</i>	1			coast live oak	Fagaceae/Oak	
I	<i>Rubus armeniacus</i>		2		Himalaya blackberry	Rosaceae/Rose	
	<i>Rubus ursinus</i>	2			CA blackberry	Rosaceae/Rose	
I	<i>Rumex acetosella</i>		1		sheep sorrel	Polygonaceae/Buckwheat	
I	<i>Rumex crispus</i>		1		curly dock	Polygonaceae/Buckwheat	
	<i>Salix lasiolepis</i>	1	1		arroyo willow	Salicaceae/Willow	
	<i>Sambucus nigra</i> subsp. <i>caerulea</i>	1	1		blue elderberry	Adoxaceae/Muskroot	
I	<i>Scabiosa</i> <i>atropurpurea</i>			1	pincushion plant	Dipsacaceae/Teasel	
	<i>Scrophularia</i> <i>californica</i>	1	1	1	California bee plant	Scrophulariaceae/Figwort	
	<i>Stipa pulchra</i>	3	2		purple-needle grass	Poaceae/Grass	
I	<i>Torilis arvensis</i>	1			hedge parsley	Apiaceae/Carrot-Parsley	
	<i>Toxicodendron</i> <i>diversilobum</i>	3	2	1	poison oak	Anacardiaceae/Sumac	
I	<i>Ulex europaeus</i>	1	3	1	gorse	Fabaceae/Legume	

	<i>Viola pedunculata</i>		2	CA golden violet, johnny-jumpup	Violaceae/Violet	
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TOTALS

Occurrence 1	38	41	15
Occurrence 2	13	14	4
Occurrence 3	9	4	0
Total	60	59	19