

# Community Wildfire Protection Plan for Ocean View, Hawaii

Sponsored by Hawaii Volcanoes National Park  
in collaboration with the Big Island Wildfire Coordinating Group



**September 2006**

Written by Denise Laitinen  
©2006

**Table of Contents:**

Signature page.....3  
Executive Summary.....4  
Background..... 5  
    Fire History..... 6  
  
Stakeholders..... 7  
  
Community Base Map for Ocean View.....9  
Fire Risk Assessment for Ocean View .....10  
    Community Assets at Risk.....11  
Community Concerns for Ocean View.....12  
Recommended Action for Ocean View .....12  
Reduce Structure Ignitability .....16

**Appendix A:** Hawaii Wildland Fire Risk and Hazard Severity Assessment Form

**Appendix B:** Updated Project List 2008-2009

**Appendix C:** Additional Pre-attack maps

Cover image: 2003-2004 fire resource map of Ocean View for pre-attack wildfire planning. Map courtesy of West Hawaii Wildfire Management Organization.

## **Ocean View Community Wildfire Protection Plan Mutual Agreement Page**

The Community Wildfire Protection Plan (CWPP) developed for Ocean View, Hawaii by the Hawaii Volcanoes National Park (HAVO):

- Was collaboratively developed. Interested parties and federal land management agencies managing land in the vicinity of Ocean View have been consulted.
- This plan identifies and prioritizes areas for hazardous fuel reduction treatments and recommends the types and methods of treatment that will protect Ocean View.
- This Plan recommends measures to reduce the ignitability of structures throughout the area addressed by the Plan.

The following entities mutually agree with the contents of this Community Wildfire Protection Plan:

\_\_\_\_\_  
**Paul J. Conry**  
**State Forester, Division of Forestry and Wildlife**

\_\_\_\_\_  
**Date**

\_\_\_\_\_  
**Darryl Oliveira**  
**Fire Chief, Hawaii County Fire Department**

\_\_\_\_\_  
**Date**

\_\_\_\_\_  
**Troy Kindred**  
**Administrator, Hawaii County Civil Defense**

\_\_\_\_\_  
**Date**

## Executive Summary:

The community of Ocean View in Hawaii County on the island of Hawaii abuts Hawaii Volcanoes National Park (HAVO) and is in a wildland urban interface (WUI) environment - that is where wildlands and houses meet. This interface area poses the highest risk of loss of life and property due to wildland fire. The risk of wildland fire impacting homes in the WUI is determined by several factors, including the ignitability of fuels, structural ignitability, weather conditions, and topographical features, such as slope. Unlike the contiguous United States, wildfire is not a natural part of Hawaii's ecosystem. In Hawaii, wildfires destroy native plants, which impacts the watershed and the habitat of threatened and endangered native Hawaiian animals. Wildfires in Hawaii also cause soil erosion, which leads to runoff that negatively impacts our ocean reefs.

The overwhelming majority of wildfires in Hawaii are caused by arson or human error. Human error includes errant fireworks, rubbish, cooking, or agricultural fires that get out of control in the wildland-urban interface, as well as vehicle-caused wildfires.

Principal stakeholders who have an interest in protecting the community of Ocean View from wildfire include Hawaii County Fire Department, Hawaii Volcanoes National Park, which sponsored this CWPP, as well as the Big Island Wildfire Coordinating Group, composed of federal, state, and county agencies, including Hawaii County Civil Defense, Department of Land and Natural Resources, U.S Army, and the U.S. Fish and Wildlife Service. These decision makers were invited to participate in the development of this Plan.

A wildfire hazard assessment determined that WUI areas in this community have an extreme risk of wildfire. Wildland fires originating within the Park can threaten the nearby community of Ocean View, including homes along Lorenzo Road in Ka'u. Conversely, wildland fires caused by human error in the community could impact the Park. The community of Ocean View, which is directly down slope of an active volcano, is susceptible to fast-moving lava flows, earthquakes, tsunamis, hurricanes, and wildland fires. The community does not have municipal water with residents and businesses relying on catchment water basins. There has also been an increase in invasive, non-native plant species that are high-intensity burning fuels, further increasing the wildfire risk within the community.

Meetings with community members and fire agency personnel identified several mitigation measures to reduce the chances of a fire starting in Ocean View. These include: (1) creation of secondary emergency egress roads; (2) reduction of fuel load along roadsides; (3) reduction of invasive species that possess inherent fire or ignition properties, such as fountain grass; (4) need for additional pre-staged static water tanks; and (5) continued fire prevention education.

Hawaii County has been fortunate in controlling large wildland fires in the communities to date. However, given the fire history of the area and the fact that HAVO is home to the world's most active volcano, one need only look at the community's fire history and fuel load to understand the severe wildfire risk. The mitigation measures outlined in this Plan will enable the community of Ocean View to reduce their risk to wildfire and create more efficient fire-protection systems. The priority mitigation measures listed above identify pro-active projects the community and fire agencies can undertake to minimize losses from a major wildland fire.

Ocean View Community Wildfire Protection Plan  
September 2006

## **Background:**

Covering a swath from sea level to a 13,000-foot mountaintop, the 377-square miles (333,000 acres) of Hawaii Volcanoes National Park on the island of Hawaii encompasses Mauna Loa, the world's largest volcano, as well as Kilauea, the world's most active volcano. The Park's ecological zones include coastal strand, dry lowland, mesic and wet rain forest, seasonally dry montane, sub-alpine, and alpine. It is home to more than 50 federally-listed endangered, threatened, and candidate endangered species, as well as numerous rare species.

Continually erupting for nearly 23 years, Kilauea has made HAVO the state's largest tourist attraction with more than 2.5 million visitors annually. The primary tourist attractions within the Park are on the south of the Park, however, the bulk of Park lands extend north of Highway 11 for more than 40 miles as far west as Manuka State Park and as far north as the summit of Mauna Loa. In the past, lava flows within the Park have caused several wildland fires, some as large as 5,000 acres. Wildfires originating within the Park could threaten the homes along Lorenzo Road in Ka'u. Conversely, wildland fires caused by human error in Ocean View or along Lorenzo Road, could impact the Park.

To the west of the community of Volcano, Park lands containing the southwest rift zone of Mauna Loa are adjacent to Lorenzo Road. Lorenzo Road, which lies between mile marker 69 and 70 on Highway 11, is an unpaved road running north-south along the border of Park lands. There are only a handful of homes along the road but they are in a wildland urban interface area.

Park lands containing the southwest rift zone of Mauna Loa are also directly north and to the east of the community of Ocean View. Ocean View encompasses the 11,500-lot Hawaiian Ocean View Estates (HOVE) north of Highway 11 and Hawaiian Ranchos and Kula Kai View Estates subdivisions on the south side of Highway 11. Ocean View is bordered by the Manuka Natural Area Reserve to the west, the southwest rift zone to the north, the 1887 and 1907 lava flows to the east, and the Pacific Ocean to the south. Given its proximity directly down slope of an active volcano, which last erupted in 1984, Ocean View is susceptible to fast-moving lava flows, earthquakes, tsunamis, and hurricanes, in addition to wildfires. A 20-acre wildfire in January 2006, caused by fireworks, came dangerously close to several homes in HOVE.

Ocean View has experienced tremendous development in recent years. Many new residents are from other parts of the United States and unfamiliar with the wildfire risks of the community.

HAVO recently acquired 119,000 acres from Kahuku Ranch in Ka'u. Located at the 1,000 – 2,000 foot elevation, the area encompasses native Hawaiian forests, pasture lands, and three dormant volcanic craters. Park lands now stretch 50 miles from lower Puna to Ocean View. Given the right wind and fuel conditions wildland fire could travel the length of this land tract, causing substantial damage.

**Fire History:**

<b>Ocean View</b>	
Hawaii County FD Fire history 2004-2005	Date
Building fire	18-Mar-05 11:54:07
Building fire	16-Dec-04 08:20:13
Cooking fire, confined to container	26-Dec-05 17:04:18
Cooking fire, confined to container	21-Dec-05 17:43:28
Cooking fire, confined to container	22-Oct-05 05:38:53
Cooking fire, confined to container	07-Oct-05 17:39:12
Cooking fire, confined to container	24-Nov-04 15:52:15
Trash or rubbish fire, contained	22-Dec-05 10:32:30
Trash or rubbish fire, contained	07-Dec-05 13:39:10
Trash or rubbish fire, contained	04-Nov-05 17:51:28
Trash or rubbish fire, contained	30-Oct-05 14:21:23
Trash or rubbish fire, contained	06-Apr-05 17:59:41
Passenger vehicle fire	07-Oct-05 13:31:49
Passenger vehicle fire	09-Jul-05 23:59:25
Passenger vehicle fire	15-Apr-05 22:46:11
Natural vegetation fire, other	25-Oct-05 15:34:54
Forest, woods or wildland fire	09-Jun-05 13:11:21
Brush, or brush and grass mixture fire	13-Dec-05 15:01:35
Brush, or brush and grass mixture fire	22-Nov-05 09:42:26
Brush, or brush and grass mixture fire	19-Nov-05 15:03:49
Brush, or brush and grass mixture fire	12-Nov-05 17:22:02
Brush, or brush and grass mixture fire	05-Jul-05 08:57:33
Brush, or brush and grass mixture fire	05-Jul-05 08:49:31
Brush, or brush and grass mixture fire	30-Dec-04 14:27:40
Outside rubbish, trash or waste fire	07-Jul-05 18:27:01
Outside rubbish, trash or waste fire	16-Apr-05 06:12:27
Outside rubbish, trash or waste fire	08-Mar-05 09:28:30
Outside rubbish, trash or waste fire	14-Feb-05 18:59:28
Outside rubbish, trash or waste fire	22-Dec-04 17:25:51
Outside rubbish, trash or waste fire	14-Dec-04 18:07:27
Special outside fire, other	09-Nov-05 18:07:44
Unauthorized burning	20-Nov-05 12:45:39
Unauthorized burning	11-Nov-05 19:12:55
Barbecue, tar kettle	23-Nov-05 01:42:39
Barbecue, tar kettle	15-Oct-05 18:10:26
Barbecue, tar kettle	18-Dec-04 07:42:37
HAVO Fire History 2004 -2005	Date
Pinao – human cause	7/29/04
Kipuka Pepeaio - lightening	12/6/04
Kahuku - human cause	8/14/05

Above is a 2004-2005 fire history chart for the Ocean View community. Since Hawaii County Fire Department is responsible for fire suppression in residential areas and HAVO is responsible for fire suppression within the Park, each organization maintains separate fire history statistics. However, the two agencies have a Memorandum of Understanding for mutual aid in fire

Ocean View Community Wildfire Protection Plan  
September 2006

suppression. Average size for all wildland fires in Ocean View responded to by Hawaii County Fire Department in the past two years was 3.2 acres. However, a 20-acre fire in HOVE in January 2006 came dangerously close to homes. Between 2004 and 2005 there were three fires within Park boundaries, the Kipuka Pepeaio fire that burned more than 600 acres, the Kahuku fire that burned less than 5 acres in Kahuku, and the Pinao fire that burned less than 1 acre. In past decade HAVO has experienced 54 fires within the Park with 5 of those burning more than 1,000 acres.

### Stakeholders:

Stakeholders are individuals or groups who have a high level of interest in the protection of their assets from wildfire. HAVO shares approximately 10 miles of boundary with the communities of Ocean View and Lorenzo Road in wildland-urban interface areas. Additional lands adjoining or within Ocean View include those managed by federal, state, county, and private entities.

The State of Hawaii's Department of Land and Natural Resources (DLNR) Division of Forestry and Wildlife (DOFAW) manages the Manuka Natural Area Reserve that runs the entire western length of Ocean View and the Ka'u Forest Reserve that lies above Lorenzo Road. The County of Hawaii owns several tracts of land within HOVE in Ocean View, ranging in size from one acre to 30 acres. The entire northern and eastern boundary of HOVE is Park land.

Community groups representing private landowners within the Ocean View community, such as the Ocean View Community Association (OVCA) are also concerned about the level of fire risk in the community. Contact information for principal stakeholders is listed below.

#### **Federal:**

##### **Hawaii Volcanoes National Park**

Joe Molhoek  
Pacific Island Fire Management Officer  
PO Box 52, HNP, HI 96718  
(808) 985-6042  
[Joe\\_Molhoek@nps.gov](mailto:Joe_Molhoek@nps.gov)



#### **State:**

##### **Department of Land and Natural Resources: Division of Forestry and Wildlife**

Wayne Ching  
State Protection Forester  
1151 Punchbowl St., Room 325, Honolulu, HI 96813  
(808) 587-4173  
[Wayne.F.Ching@hawaii.gov](mailto:Wayne.F.Ching@hawaii.gov)



**County:**

**Hawaii County Fire Department**

Fire Chief Darryl Oliveira  
25 Aupuni St., Hilo, HI 96720  
(808) 961-8297

[Hcfd1@co.hawaii.hi.us](mailto:Hcfd1@co.hawaii.hi.us)



**County:**

**Hawaii County Civil Defense**

Troy Kindred  
Civil Defense Administrator  
920 Ululani St., Hilo, HI 96720  
(808) 961-8229

[tkindred@co.hawaii.hi.us](mailto:tkindred@co.hawaii.hi.us)



Ocean View Community Wildfire Protection Plan  
September 2006

### Base Map of Ocean View:

Figure 1 is a base map of the community of Ocean View and adjacent landowners. The inhabited areas at potential risk to wildland fire include HOVE, Hawaiian Ranchos, Kula Kai View Estates, and further to the east Lorenzo Road in Ka'u.

Areas containing critical human infrastructure, such as escape routes include HOVE and Ranchos. Within HOVE, the Community Center could be used as "defend in place" zone if deemed necessary by fire officials given wildfire conditions.

Areas of community importance include the OVCA Community Center and churches with HOVE; restaurants and retail establishments along Highway 11; Manuka Natural Area Reserve; native dryland forest; cultural and archeological features; and caves.

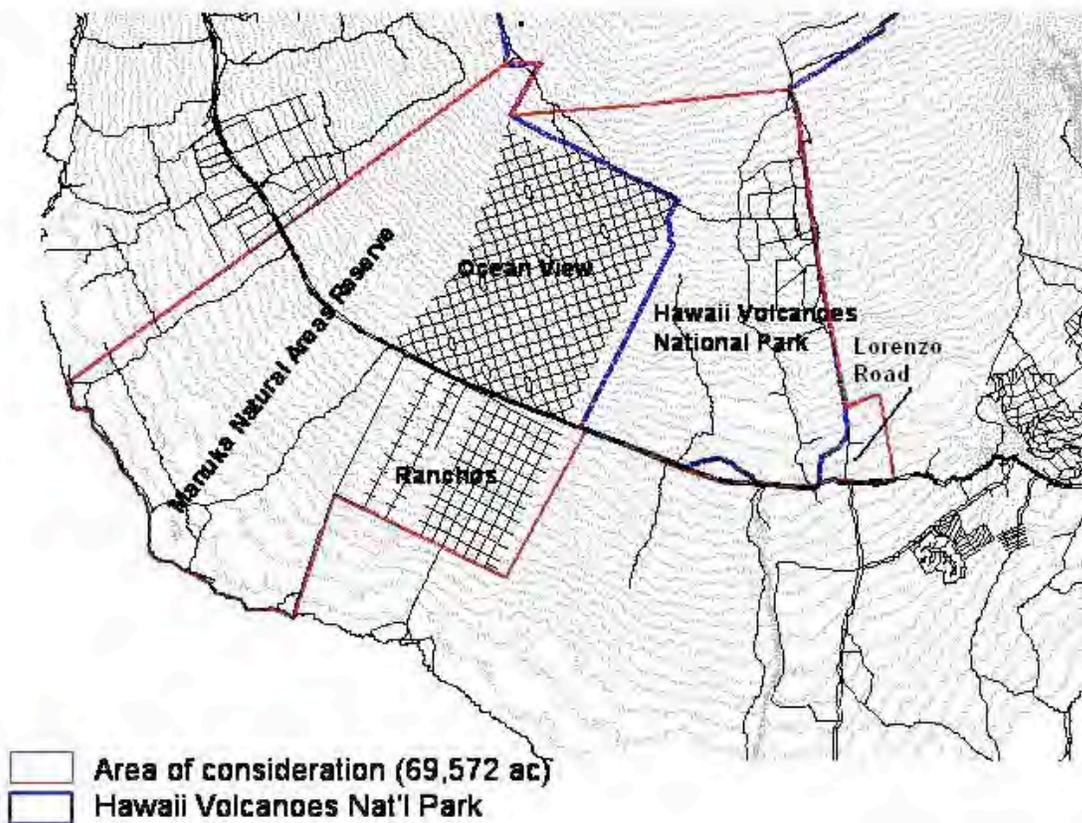


Figure 1: Area of consideration for the Ocean View CWPP is outlined in red covers more than 69,000 acres.

Ocean View Community Wildfire Protection Plan  
September 2006

## Fire Risk Assessment for Lorenzo Road and Ocean View:



Typical house lot within HOVE.

Ocean View encompasses the 11,500-lot Hawaiian Ocean View Estates (HOVE) north of Highway 11 and Hawaiian Ranchos and Kula Kai View Estates subdivisions on the south side of Highway 11. Ocean View is hilly with slope above 20 percent throughout the community. Classified as Zone 1 and 2 for volcanic activity (zones closest to an active volcano), a'a flows dominate large areas within the subdivisions.

Ocean View is bordered by Manuka Natural Area Reserve to the west, the southwest rift zone to the north, the 1887 and 1907 lava flows to the east, and the Pacific ocean to the south. There are scattered retail establishments along

Highway 11 between HOVE and Hawaiian Ranchos. There are an estimated 6,000 residents in HOVE, which contains several churches and a community center used daily by various community groups. HOVE starts at the 2,000-foot elevation along Highway 11 up to the 7,000-foot elevation along the northern boundary of the subdivision.

Roughly 250 residents live in Hawaiian Ranchos and Kula Kai View Estates has roughly a dozen homes. There are multiple means of ingress and egress from Highway 11 to the HOVE and Ranchos subdivisions. Roads within the community are paved and 20 feet in width with shoulders. However, if Highway 11 were to be closed or compromised by wildland fire or lava, it would severely impact evacuation efforts.

To the east of Ocean View, Park lands containing the southwest rift zone of Mauna Loa are adjacent to Lorenzo Road, which lies between mile marker 69 and 70 on Highway 11. It is an unpaved road running north-south along the border of Park lands. There are only a handful of homes along the road but they directly border HAVO land and are in a wildland urban interface area.



Typical house on Lorenzo Road - note the lack of defensible space.

A county fire station comprised of both paid and volunteer members is located within HOVE. The station has a 33,000-gallon soft cover catchment tank that can be used as a dip tank for fire suppression; however, the tank must also service station needs, such as showering, cooking, etc. There is no municipal water in Ocean View with residents relying on catchment water. The nearest fire hydrant is 13 miles east in Discovery Harbor and to the west, the nearest hydrant is 20 miles away in Honaunau. The community receives 30-40 inches of rainfall during the year.

Pockets, or kipuka, of native dryland forest occur throughout Ocean View. At lower elevations, these kipuka have been invaded by alien trees, shrubs, and grasses. Many of the grasses, such as molasses grass (*Melinis minutiflora*) and fountain grass (*Pennisetum setaceum*) are fire-adapted and increase wildfire potential in areas they invade.

Ocean View Community Wildfire Protection Plan  
September 2006

The 1887 and 1907 lava flows traverse HOVE and communities below the highway. These flows along with older sparsely vegetated flows serve as natural fuel breaks. However, the introduction of fountain grass has compromised these fuel breaks. A non-native species, fountain grass is becoming prevalent across the lava flow, enabling fire to travel on the fuel break. Fountain grass is so prevalent in Hawaiian Ranchos that complete eradication of the plant is unfeasible. Fountain grass is less prevalent in HOVE and the community is working proactively with DOFAW and HAVO to eradicate fountain grass along the roadsides and prevent its spread onto lava flows.

A Hawaii Wildland Fire Risk and Hazard Severity Assessment based on the Assessment in Appendix A of NFPA 1144, *Standard for Protection of Life and Property from Wildland Fire*, was conducted by the Hawaii Firewise Coordinator and HAVO firefighting personnel on April 12, 2006 to identify the level of wildfire risk for the communities of Ocean View, including Hawaiian Ocean View Estates, Hawaiian Ranchos, Kula Kai View Estates, and Lorenzo Road.

Using a pre-established point system, the Wildland Fire Risk and Hazard Severity Assessment is a tool used to determine the level of wildfire risk to a home or community. Points are given regarding overall terrain and location, road width, local area fire history, prevailing winds and seasonal weather, geographical contours, native vegetation, water availability, location of fire suppression resources, as well as the combustibility of building materials, including roof, siding, and attached items, such as decks, fencing, or an unit. The combined points in all these categories are added together and the overall risk is determined by whether the score falls in the low-, medium-, high-, or extreme-risk point range. Given the ignitability of individual structures, preponderance of fuels in close proximity to structures, and lack of water, Ocean View scored within the extreme-risk score range in the Assessment, a copy of which can be found in Appendix A.

### **Community Assets at Risk:**

Assets at risk are valued resources that can be damaged or destroyed by wildfire. In addition to ensuring firefighter safety and protecting residents and visitors, the following assets warrant consideration in pre-incident planning: watersheds; forest reserves; wildlife; scenic, cultural, and archeological sites; ranchlands; and structures.

The following were identified as valued resources within the Ocean View community that would be adversely affected by wildfire.

Commercial / community resources:

OVCA Community Center, churches, restaurants, and retail establishments.

Natural Resources:

Manuka Natural Area Reserve, native dryland forest, rare and endangered plants and animals, cultural and archeological features, and caves.

This Plan focuses on structures within the wildland urban interface in Ocean View. Overgrown vegetation close to homes, an increase of non-native high-intensity plants, and a lack of water create unsafe fire conditions. In addition, all residential areas within Ocean View are experiencing rapid development. The majority of homes within Ocean View have Class A

Ocean View Community Wildfire Protection Plan  
September 2006

roofing, however, several homes have combustible siding and/or lanais (decks). Homes also vary widely in defensible space, with lava serving as a natural fuel break on some lots and vegetation growing close to the home on other lots. Few driveways have turnaround access for emergency vehicles. Signage for interior roads within Ocean View subdivisions are metal and reflectorized.

### **Community Concerns for Ocean View:**

Residents within HOVE recently formed a community disaster preparedness committee and are aggressively pursuing means to reduce disaster threats, including wildfire, within their community. Multiple meetings specifically on the CWPP process held between April and June 2006 with community members and fire agencies identified the most pressing fire concerns in Ocean View. They include, in order of priority:

1. Lack of water;
2. Effective communication between emergency personnel and residents during a wildfire or other disaster;
3. Community egress and firefighting vehicle ingress during a wildfire;
  - 3a. Identification of evacuation route roads within subdivisions;
4. Fuel load along roadsides;
5. Reduction of invasive species possessing inherent fire or ignition properties;
6. Public awareness of the wildfire threat; and
7. Strengthening of Hawaii County fire ordinances.

### **Recommended Action for Ocean View:**

Based on identified community concerns, the following recommendations are made to reduce the wildfire threat in Ocean View. The implementation of a multi-modal approach will increase firefighting efficiency, reduce fire fuels, and improve community and firefighter safety. Mitigation measures to reduce wildfire risk in Ocean View include in order of priority:

1. Pre-staged static water tanks;
2. Increased communication to residents regarding evacuation during an emergency;
3. Creation/improvement of secondary access road; identification of evacuation route roads within subdivisions;
4. Reduction of fuel load along road sides and in common areas;
5. Reduction of invasive species that increase fire risk;
6. Continued fire prevention education and outreach; and
7. Strengthening of Hawaii County fire ordinances.

Based on the results of the community risk assessment, priority ratings have been selected for Ocean View and areas of community importance. The community recommendations for the type and method of treatment for the surrounding vegetation are listed in the following table.

Ocean View Community Wildfire Protection Plan  
September 2006

<b>Community, structure or area at risk</b>	<b>Type of Treatment</b>	<b>Method of Treatment</b>	<b>Overall Priority</b>
Ocean View	Mechanical	Need for additional pre-staged static water tanks	Very High
		Improved communication between emergency personnel and residents regarding evacuation	Very High
Ocean View	Mechanical / Chemical / Hand Labor	Creation of secondary emergency ingress/egress roads	Very High
Ocean View	Mechanical	Street signage identifying evacuation routes	High
Ocean View	Mechanical	Reduction of fuel load along roadsides	High
Ocean View	Mechanical / Chemical / Hand Labor	Reduction of invasive species	High
Ocean View	Public Education and Outreach	Continued fire prevention education and outreach	High
Ocean View	Political	Strengthening of County fire ordinances	High
Lorenzo Road	Mechanical / Chemical / Hand Labor	Reduction of fuel load along roadsides	High
Lorenzo Road	Public Education and Outreach	Continued fire prevention education and outreach	High

Community organizations, federal agencies, and private landowners surrounding Ocean View were invited to submit projects that provide protection and reduce wildfire risk. The following table displays a list of projects based on recommendations from community and fire-related organizations. HAVO intends to assess the progress annually and invite agencies and landowners to submit projects that provide community protection.

<b>Community, structure, or area at risk</b>	<b>Project</b>	<b>Agency</b>	<b>Funding Needs</b>	<b>Timetable</b>	<b>Community Recommendation</b>
Ocean View	Creation of pre-staged static water tanks	Multiple Agencies: federal, state, county, and private	Cooperative Funding	2006 - 2007	Yes
Ocean View	Improved communication between emergency officials and residents regarding	Multiple Agencies: OVCA, County	Cooperative Funding	2006 - 2007	Yes

Ocean View Community Wildfire Protection Plan  
September 2006

	evacuation				
Ocean View	Creation of secondary emergency ingress/egress roads	Multiple Agencies: federal, state, county, and private	Cooperative Funding	2006 - 2007	Yes
Ocean View	Street signage identifying evacuation routes	Multiple Agencies: federal, state, county, and private	Cooperative Funding	2006 - 2007	Yes
Ocean View	Reduction of fuel load along roadsides	Private	Cooperative Funding	2006 - 2007	Yes
Ocean View	Reduction of invasive species	HAVO	Cooperative Funding	2006 - 2007	Yes
Ocean View	Continued fire prevention education and outreach	Multiple agencies: federal, state, county, and private	Cooperative Funding	2006 - 2007	Yes
Ocean View	Strengthening of County fire ordinances	Multiple agencies	Cooperative Funding	2006 - 2007	Yes
Lorenzo Road	Reduction of fuel load along roadsides	Multiple agencies	Cooperative Funding	2006 - 2007	Yes
Lorenzo Road	Continued fire prevention education and outreach	Multiple agencies	Cooperative Funding	2006 - 2007	Yes

### **Pre-staged static water tanks**

Given that residents rely on catchment water, the area experiences nominal rainfall, and there are no fire hydrants within Ocean View, lack of water for fire suppression was identified as one of the most important challenges facing the community. Pre-staged static water tanks will greatly increase effective fire suppression and firefighting efficiency.

### **Communication between emergency personnel and community members during disaster**

Fires, earthquakes, and lava flows are among the risks that threaten the Ocean View community. These risks can be fast moving, necessitating quick dissemination of safety and evacuation information to residents. The creation of block captains and use of walkie-talkies is recommended for use to alert residents to fast moving dangers, such as wildfires.

**Creation / improvement of secondary access roads**

Creation or improvement of secondary access roads to improve emergency egress and facilitate fire suppression activities should be examined and implemented where appropriate. There are only two access roads that connect Hawaiian Ranchos Subdivision and the adjacent subdivisions to Highway 11. Kula Kai and Lorenzo Road are each connected by a single access road to the highway. Positioning of secondary emergency access roads should be evaluated and appropriately implemented to allow for more effective fire suppression and emergency egress. Currently, there are two unpaved jeep trails to the east of HOVE that connect to Highway 11. Improving these access roads may provide residents with another escape route and improve emergency egress.

In order to remain effective, the secondary emergency egress roads must be maintained on a regular basis. Funding should be secured to ensure that the roads are maintained at least twice a year. The organization that is determined to be responsible for the access roads may want to consider the purchase of a dozer or other equipment to maintain the roads.

Also, evacuation routes should be clearly identified within the subdivision with signage posted marking these roads for express egress in case of emergency.

**Reduction of fuel load**

Reducing vegetation in the vicinity of valued resources (churches, Community Center, houses), in common areas and along road sides and fuel breaks will decrease fire risk to important resources and improve fire suppression capabilities.

**Reduction of invasive species**

Invasive grasses, such as molasses grass and fountain grass are high-intensity burning fuels that carry fire to other fuels. The ability of fountain grass to establish on barren 'a'a flows compromises natural fire breaks provided by lava. Current efforts to eradicate roadside populations and prevent its spread to lava flows should be continued. It is recommended that the Ocean View Community Association adopt CCRs prohibiting fountain grass within the community. For Hawaiian Ranchos and other subdivisions where the grass is well established and eradication may be unfeasible, mapping the current distribution and density of individuals is needed to develop alternative strategies for reducing fire potential. Such alternatives may include containing the spread of the invasion or maintaining fountain grass "free" zones. It is also strongly recommended that outreach efforts include alerting residents and developers to the wildfire risk caused by invasive species and ways to prevent their spread (e.g. inspection, sanitation, landscaping with native species).

**Continued fire prevention education**

Fire agencies in Hawaii County have partnered with Firewise to promote community wildland fire awareness in wildland urban interface communities. The objective is to increase overall awareness of fire hazard issues that affect residents within the wildland urban interface. While a Firewise coordinator has provided much needed outreach in the community, funding for such a position has been intermittent. Stable funding for an outreach coordinator should be developed to ensure consistent fire prevention outreach. With a continued influx of residents from other parts of the United States who are unaware of Ocean View's unique fire risks, it is crucial to continue a comprehensive fire education and outreach campaign. This program should consist of the following:

Ocean View Community Wildfire Protection Plan  
September 2006

- a. Continued development and coordination of community meetings and outreach events. Coordination with other community groups, such as the local disaster preparedness committee and civic organizations, to provide wildland fire safety information on defensible space and Firewise building materials. Provide outreach at community events.
- b. Develop educational materials specific to community fire threat and continue outreach in local publications. The Firewise coordinator is currently providing monthly editorial to local publications in Ka'u and Ocean View on fire prevention. Continued outreach is needed with large numbers of new residents moving into the area.
- c. Development of fire prevention outreach materials, including TV and radio public service announcements, posters, and handouts.

### **Strengthening of county fire ordinances**

Currently, there is a county ordinance prohibiting open burning, although there is a caveat permitting cooking fires. Fire ordinances should be incorporated as part of the Uniform Fire Code adopted by the County and the language defining cooking fires should be strengthened. It is recommended that Hawaii County create and enforce citations of ordinance violations, giving the Hawaii County Fire Department the necessary "teeth" to enforce such ordinances. It is recommended that changes be made to federal, state, and county rules and regulations to support and promote proactive and preventative measures to reduce the threat of wildfire. County planning requirements should incorporate proactive fire prevention measures, such as mandating the use of residential fire sprinklers in all new single-family dwellings, the use of fire-resistant building materials for new home construction, and the creation of defensible space around communities and homes.

### **Reduce Structural Ignitability:**

As part of its fire prevention education efforts, Firewise provides recommendations to reduce structural ignitability. Individuals and the Volcano community can reduce structural ignitability throughout the community by taking the following measures.

- Create a buffer zone of defensible space around a property of at least 30 feet or to the property line if the house has less than 30 feet of yard. Remove flammable vegetation and combustible growth within 30 feet of the house.
- Prune tree limbs 6 – 10 feet above the ground.
- Space trees and shrubs ten feet apart in the yard.
- Make sure that plants closest to the house are low-lying. And whenever possible use native Hawaiian or succulent plants.
- Routinely remove dead leaves and other organic matter from the yard.
- Sweep and/or clean gutters, eaves, and roofs regularly to prevent the build-up of leaves and other matter.
- Use fire-resistant building materials for the roof, siding, and decks, such as metal, stucco, tile, brick, and cement.

Ocean View Community Wildfire Protection Plan  
September 2006

**Appendix A:**

Please see attached Hawaii Wildland Fire Risk and Hazard Severity Assessment Form.

**Appendix B:****Updated Project List 2008-2009**

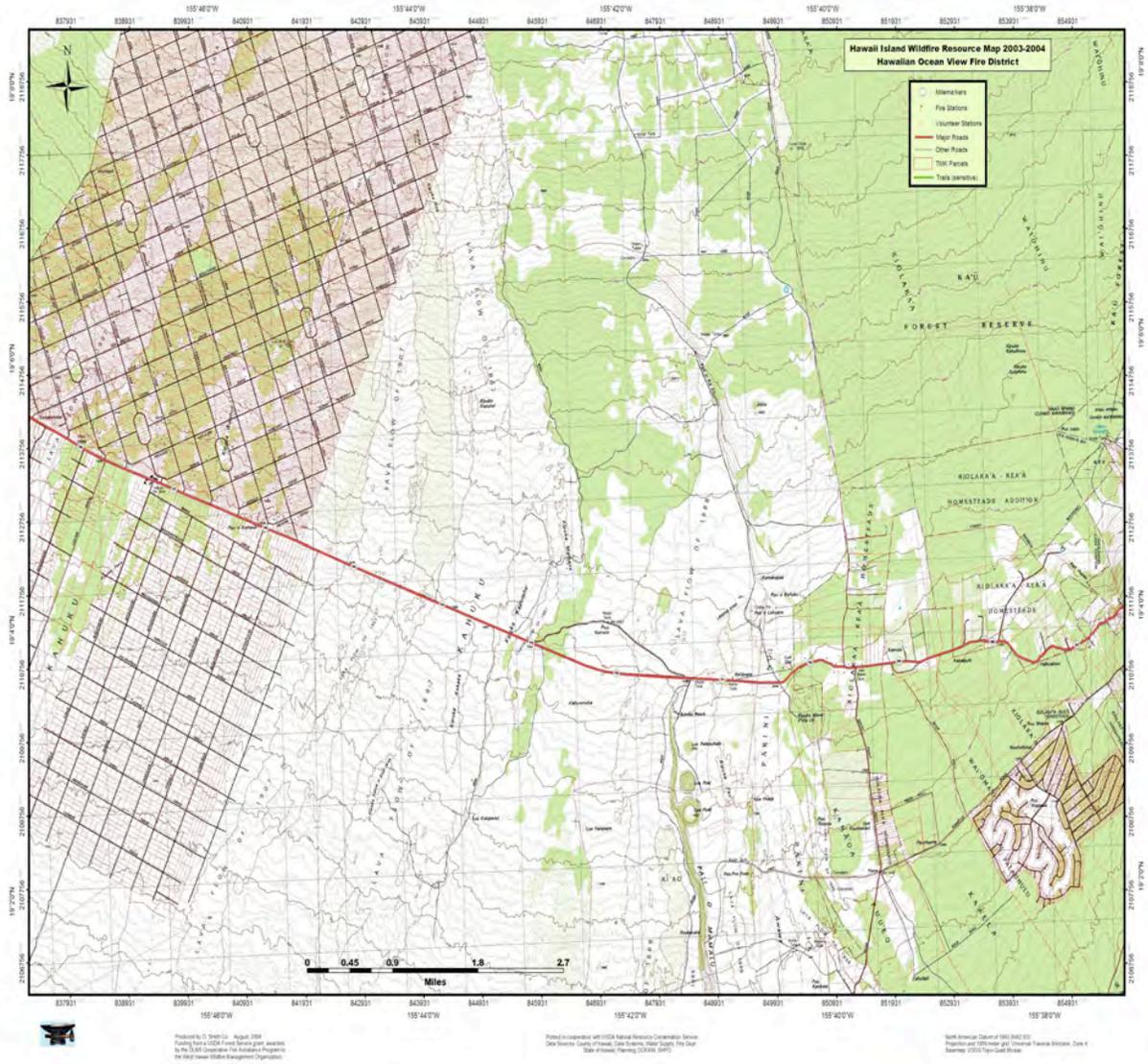
Federal agencies and private landowners surrounding Ocean View were invited to submit projects that provide wildfire protection and reduce risk. The following table displays a list of recommended projects.

<b>Community, structure or area at risk</b>	<b>Project</b>	<b>Agency / landowner</b>	<b>Funding Needs</b>	<b>Timetable</b>	<b>Community recommendation</b>
Ocean View	Creation / Maintenance of pre-staged static water tanks	Multiple Agencies	Cooperative Funding	2008-9	Yes
Ocean View	Improved communication between emergency officials and residents regarding evacuation	Multiple Agencies	Cooperative Funding	2008-9	Yes
Ocean View	Maintenance of secondary emergency access road	HAVO, Private	Cooperative Funding	2008-9	Yes
Ocean View	Maintenance of street signage identifying evacuation routes	Multiple Agencies	Cooperative Funding	2008-9	Yes
Ocean View, Lorenzo Road	Reduction of fuel load along roadsides	Multiple Agencies	Cooperative Funding	2008-9	Yes
Ocean View, Lorenzo Road	Reduction of invasive species	Multiple Agencies	Cooperative Funding	2008-9	Yes
Ocean View, Lorenzo Road	Continued fire prevention education and outreach	Multiple Agencies	Cooperative Funding	2008-9	Yes
Hawaii County	Strengthening of County fire ordinances	Multiple Agencies	Cooperative Funding	2008-9	Yes

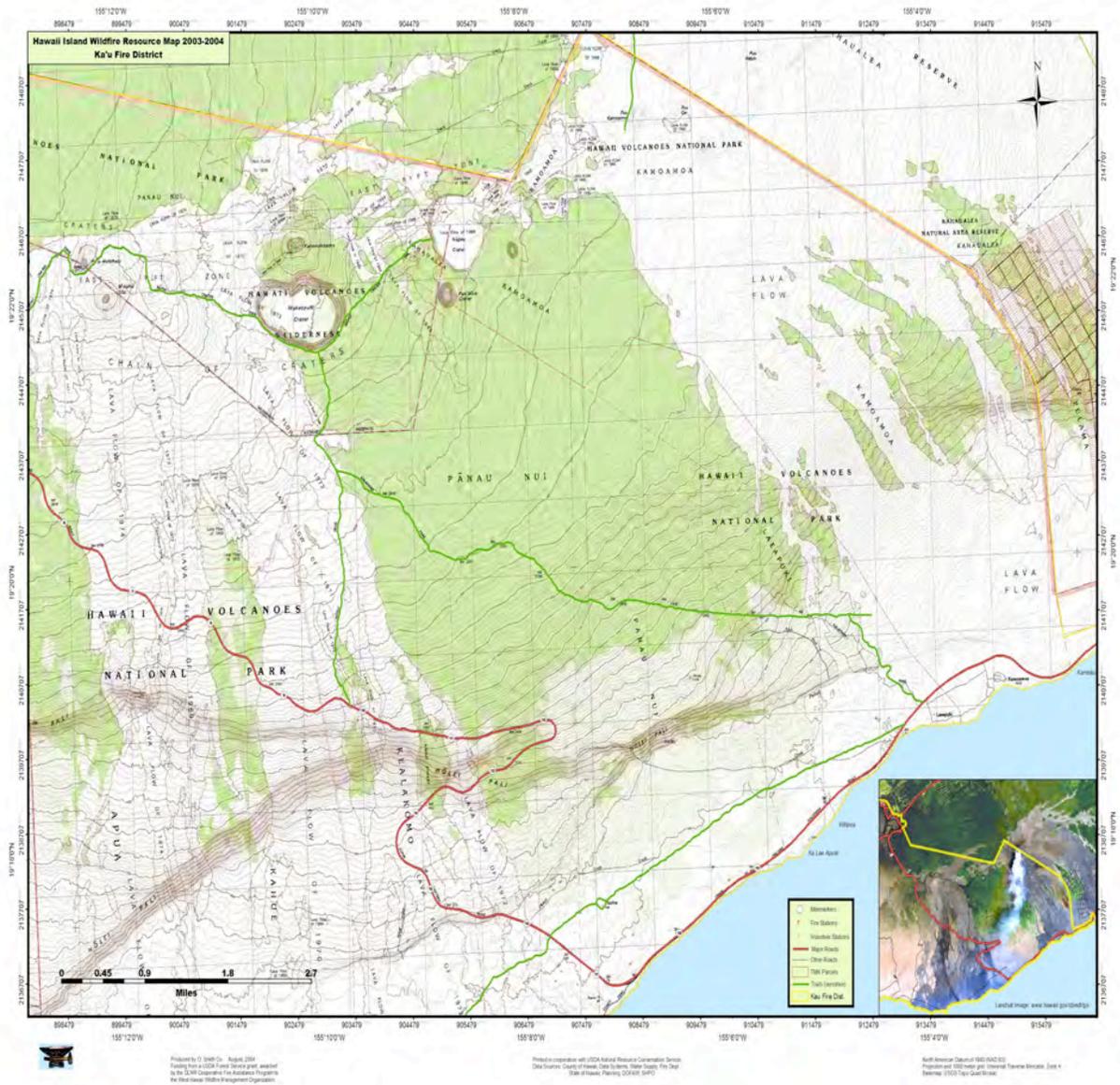
Ocean View Community Wildfire Protection Plan  
September 2006

Appendix C:

Pre-Attack Maps for Ocean View, Hawaii



# Ocean View Community Wildfire Protection Plan September 2006



Maps courtesy of West Hawaii Wildfire Management Organization.