







#### **CITY CLERKS: PLEASE POST**

#### AGENDA

#### PALOS VERDES PENINSULA PUBLIC SAFETY COMMITTEE

#### THURSDAY, MAY 13, 2021 7:30 A.M.

#### VIRTUAL MEETING

Pursuant to Section 3 of <u>Executive Order N-29-20</u>, issued by Governor Gavin Newsom on March 17, 2020, the meeting of the Palos Verdes Peninsula Public Safety Committee for Thursday, May 13, 2021, at 7:30 a.m., will be conducted via teleconference using the Zoom platform. Please see separate cover for public participation options.

#### 1. CALL TO ORDER

- 2. ROLL CALL
- 3. PLEDGE OF ALLEGIANCE

#### 4. PUBLIC COMMENT

**NOTE:** This is the appropriate time for members of the public to make comments regarding items not listed on this agenda. Pursuant to the Brown Act, no action will take place on any items not listed on the agenda.

#### 5. APPROVAL OF MINUTES

A. MINUTES OF FEBRUARY 11, 2021

#### 6. OLD BUSINESS

A. UPDATE ON THE PENINSULA EMERGENCY PREPAREDNESS TASKFORCE (RHE VERBAL REPORT)

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- B. UPDATE ON JOINTLY FUNDED SCHOOL RESOURCE OFFICER (PVPUSD VERBAL REPORT)
- C. SUMMARY REPORT ON THE PENINSULA WIDE EMERGENCY PREPAREDNESS EXERCISE ON FEBRUARY 25, 2021 (RPV)
- D. UPDATED DRAFT OF THE PENINSULA WHITE PAPER ON UTILITY COMPANIES' RESPONSE TO A DISASTER (RPV)

#### 7. <u>NEW BUSINESS</u>

- A. PENINSULA CITIES COVID-19 VACCINATION REPORT (RPV VERBAL REPORT)
- B. BRUSH CLEARANCE (LACFD VERBAL REPORT)
- C. STRATEGY FOR PENINSULA WIDE EMERGENCY COORDINATION THROUGH A SHARED COORDINATOR (RH)

#### 8. <u>OTHER MATTERS FROM REGIONAL EMERGENCY PREPAREDNESS</u> <u>COMMITTEE MEMBERS</u>

**NOTE:** This is the appropriate time for Committee Members to direct the placement of items for future action on upcoming agendas.

#### 9. ADJOURNMENT

A. Next regular meeting Thursday, August 12, 2021 at 7:30 a.m.

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INCORPORATED JANUARY 24, 1957



Pursuant to Section 3 of Executive Order N-29-20, issued by Governor Gavin Newsom on March 17, 20202, the meeting of the Peninsula Public Safety Committee and the Peninsula Regional Contract Law Committee for Thursday, May 13, 2021, at 7:30am, will be conducted via teleconference using the Zoom platform.

Those members of the public wishing to participate may do so in the following ways:

City of Rolling Hills

- 1. Viewing the "live" meeting: To view the City Council meeting live, email Connie Viramontes at <u>cityclerk@cityofrh.net</u> with you name and contact information prior to 3pm on Wednesday prior to the meeting. Upon successful submission, you will receive an email with further instructions on how to connect to the meeting.
- 2. Comments on non-agenda and specific agenda item(s): If you wish to make a comment, please submit via email to Connie Viramontes at <u>cityclerk@cityofrh.net</u>. Comments received by 3pm on the Wednesday prior to the meeting will be forwarded to the Committees prior to the meeting for consideration. Comments received after 3pm on the Wednesday prior to the meeting will not be read during the meeting.
- 3. Comments on non-agenda and specific agenda item(s) during the "live" meeting: If you are watching the meeting live and wish to make a comment on an agenda item, as it is being heard, you may submit your brief comment using the following methods below. Please note that there is a maximum allowance of 3 minutes per individual comment, subject to the Chair's direction. Your comment will be read or heard during the meeting, if received in real time and prior to the commencement of that item.
  - a. Email: Comments will be accepted via email at <u>cityclerk@cityofrh.net</u> during the meeting, prior to the close of the public comment portion on an item or during public comments for non-agenda items, and read aloud into the record with a maximum allowance of 3 minutes per individual comment, subject to the Chair's discretion.
  - b. Telephone: If you wish to speak during the meeting, email Connie Viramontes at <u>cityclerk@cityofrh.net</u> with you name, contact information, and the item number on which you wish to comment. Upon successful submission, you will receive an email with further instructions on how to connect to the meeting.

In compliance with the American with Disability Act, if you require a disability-related modification or accommodation to participate in this meeting, please contact the City at least 48 hours prior to the meeting via <u>cityclerk@cityofrh.net</u>. Staff will use their best effort to provide reasonable accommodations to provide as much accessibility as possible while also maintaining public safety.









#### PALOS VERDES PENINSULA PUBLIC SAFETY COMMITTEE MINUTES TO MEETING ON THURSDAY, FEBRUARY 11, 2021

#### I. CALL TO ORDER

A meeting of the Palos Verdes Peninsula Regional Emergency Preparedness Committee was called to order by Committee Chair Pro Tem Alegria at 7:30 a.m. via Zoom.

#### II. ROLL CALL

PRESENT:

Rancho Palos Verdes

Eric Alegria, Mayor David Bradley, Mayor Pro Tem **Rolling Hills Estates** Steve Zuckerman, Mayor Velveth Schmitz, Councilmember **Rolling Hills** Bea Dieringer, Mayor Patrick Wilson, Councilmember **Palos Verdes Estates** David McGowan, Councilmember Dawn Murdock, Councilmember

ALSO PRESENT: Rancho Palos Verdes

Ara Mihranian, City Manager Karina Bañales, Deputy City Manager Jesse Villalpando, Emergency Services Coordinator Mckenzie Bright, Administrative Analyst **Rolling Hills Estates** Greg Grammer, City Manager Alexa Davis, Assistant City Manager, Jessica Slawson, Administrative Analyst **Rolling Hills** Elaine Jeng, City Manager **Palos Verdes Estates** Laura Guglielmo, City Manager Tony Best, Acting Police Chief Marcelle Herrera, Community Relations Officer

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Los Angeles County Sheriff's Department Captain James Powers, Lomita Sheriff's Station Palos Verdes Peninsula Unified School District (PVPUSD) Brenna Terrones, Assistant Superintendent of Administrative Services

Chair Alegria welcomed new Committee member Dawn Murdock. Member McGowan introduced Ms. Murdock and provided a brief bio.

#### III. PLEDGE OF ALLEGIANCE

Coordinator Villalpando led the pledge of allegiance.

#### IV. PUBLIC COMMENT

None.

#### V. APPROVAL OF MINUTES

#### A. MINUTES OF NOVEMBER 12, 2020

Member Dieringer moved to have staff correct the grammatical errors she identified and approve the November 12, 2020 meeting minutes. Member Steve Zuckerman seconded the motion. The motion passed.

- AYES: Chair Alegria, Members Bradley, Zuckerman, Schmitz, Dieringer, Wilson, McGowan, and Murdock.
- NOES: None

#### VI. <u>COMMITTEE REORGANIZATION</u>

Chair Alegria thanked all members of the Committee for the opportunity to serve as the chair. Chair Alegria nominated Member Dieringer as Chair and Member Wilson as Vice Chair. Member Zuckerman seconded the motion. The motion passed.

- AYES: Chair Alegria, Members: Bradley, Zuckerman, Schmitz, Dieringer, Wilson, McGowan, and Murdock.
- NOTES: None

#### VII. OLD BUSINESS

A. UPDATE ON THE PENINSULA EMERGENCY PREPAREDNESS TASKFORCE (VERBAL REPORT) Analyst Slawson reported that at the January 12, 2021 Peninsula Emergency Preparedness Taskforce (PEPT) meeting, participating agencies worked on educating the community on safety protocols, re-opening protocols, and vaccination information as provided by Los Angeles County Public Health Department. The Palos Verdes Peninsula Unified School District (PVPUSD) reported that student food services will continue and pre-school programs and child care services are available. Southern California Edison, and Cal Water reported that essential staff are working in small pods with office staff working remotely when possible. Palos Verdes Peninsula Transit reported that dial-a-ride service is active but ridership was down likely due to the availability of telehealth. The Palos Verdes Peninsula CERT coordinator reported on her coordination with the Los Angeles County Fire Department on hybrid CERT courses and course schedule will be announced soon. Finally, the City of Rolling Hills Estates (RHE) held its 23<sup>rd</sup> Parade of Lights drive through event on December 5, 2020 at Ernie Howell Park with approximately 1,500-2,000 participants. Many toys were collected at the event and the Sheriff's Department distributed the collection to local hospitals and families over the holiday.

Member Alegria thanked RHE for a wonderful event and expressed appreciation for the City's creativity in holding a community event in the COVID environment.

Chair Dieringer echoed Member Alegria's comments.

Member Schmitz thanked all participating agencies in the Parade of Lights. Member Schmitz recognized RHE staff for their efforts, initiative and attention to details and credited staff for the success of the event.

# B. UPDATE ON THE UPCOMING PENINSULA WIDE EMERGENCY PREPAREDNESS EXERCISE (VERBAL REPORT)

Coordinator Villalpando informed the group that the tabletop emergency preparedness exercise was intended to start the conversation among the Peninsula cities on coordination. The exercise was scheduled for February 25, 2021 and would simulate a mass evacuation scenario triggered by a wildfire event at the northeast area of the Portuguese Bend Reserve. Realistic scenarios would be outlined for the group to react. The exercise aimed to focus on two areas: best practices to share critical information in the first few hours of the event and defining the roles of the cities and support for the First Responders.

Member McGowan inquired about community participation in the exercise. Chair Dieringer inquired about the time and duration of the exercise and participation by elected officials.

Coordinator Villalpando said this first exercise was limited to city staff and First Responders. Elected officials should coordinate with staff from respective cities to

participate in the exercise. The exercise was planned for 2.5 hours, starting at 9am and to be held virtually.

#### VIII. <u>NEW BUSINESS</u>

#### A. PRESENTATION ON A DRAFT OF THE PENINSULA WHITE PAPER ON UTILITY COMPANIES' RESPONSE TO A DISASTER

Coordinator Villalpando presented the draft of the white paper noted that this is the first draft; communication utility in the next draft. Coordinator Villalpando requested the Committee's feedback on the draft white paper.

Larry Maizlish thanked staff for the work on the white paper. Mr. Maizlish noted that one critical utility, communication, should be added to the paper. The draft paper identified vulnerabilities and inquired the intended use of the study. Mr. Maizlish commented that the utility companies should review the white paper and provide input.

Coordinator Villalpando responded that communication utility will be included in the next draft. Coordinator Villalpando asked the Committee to assist with the question on the intent of the white paper as the Committee asked for the paper prior to his tenure with RPV. Coordinator Villalpando noted that he planned to integrate the findings in the white paper into RPV's Emergency Operations Plan.

Member McGowan added that the white paper came about to address an event triggering prolonged power outage. The Committee wanted to study the impacts of the prolonged outage to other utilities, such as water pumps. Member McGowan echoed the importance of studying the interdependence of electricity and communication and noted that through the white paper, the utility companies should suggest to the cities provisions for readiness.

Chair Dieringer echoed the need for the utility companies to review and provide feedback on the white paper.

City Manager Guglielmo reported that COX planned to use natural gas generators as backup power source to the utility's facilities in PVE; City Manager Guglielmo suspected that the usage of generators will be applied elsewhere in COX's service areas.

Member Zuckerman said that he received the first ten pages of the draft paper as a part of the agenda. From the presentation, the draft appeared to have eighteen pages. He requested to have a copy of the full paper. Member Zuckerman noted that the water reservoir on the top of the hill used to be the primary source of water for the Peninsula. He inquired about the impacts to the reservoir and connected pipes, in the event of a seismic event. Member Zuckerman also inquired on correspondences to date with Disaster Planning Area G, the State and FEMA with respect to the white paper. Member Zuckerman expressed that expertise of these agencies would be helpful in reviewing the white paper. He is pleased with the progress on the paper and looked forward to the final draft.

Coordinator Villalpondo responded that there are have been no correspondences with the referenced agencies but he will reach out to Area G and then contact the other agencies following.

Member McGowan applauded the work that has been done and asked to establish a timeframe to involve the utility companies on this matter.

Coordinator Villalpondo responded that the utilities' input will be included in the next draft to be presented to the Committee in May.

Chair Dieringer asked if the Committee needed to take action on this item.

City Manager Grammar responded that with the Committee's directions to staff, there was no need for Committee action.

#### IX. <u>OTHER MATTERS FROM REGIONAL EMERGENCY PREPAREDNESS</u> <u>COMMITTEE MEMBERS</u>

Chair Dieringer asked the Committee members for agenda items for the next meeting.

Member Alegria asked for staff's guidance on a coordinated communication plan on vaccination deployment on the Peninsula.

City Manager Mihranian stated that staff's efforts on the vaccination front will be reported to the Committee in May.

Diane Robertson, representing RPV Emergency Committee asked about equestrian evacuation.

Member Zuckerman, Coordinator Villalpondo and City Manager Mihranian responded that appropriate contacts at cities can provide information on equestrian evacuation and that the cities' Hazard Mitigation Plan would have relevant information on the subject.

Chair Dieringer suggested that after the table exercise, equine evacuation should be included in subsequent emergency exercises.

City Manager Jeng noted that the Peninsula cities were discussing the use of one shared emergency coordinator to pull individual emergency plans for each city and orchestrate Peninsula wide coordination. City Manager Jeng said that an item on the shared coordinator will be presented at the May meeting. Member Zuckerman discussed the need for a traffic study that looked at exit points from the Peninsula, and traffic control needs during evacuation events. Member Zuckerman also commented that if RHNA numbers are fully implemented on the Peninsula, it could adversely impact the area with existing vulnerabilities and being in a high fire severity zone.

Captain Powers stated that he has been working with Elaine on evacuation routes for the past two years. His deputies are consistently reviewing routes on the Peninsula but evacuation routes cannot be identified in advance as they are dependent on the event.

Mr. Maizlish informed the Committee that the RPV Emergency preparedness Subcommittee is reviewing lessons learned from the recent Woolsey Fire.

#### X. ADJOURNMENT

There being no further business before the Palos Verdes Peninsula Regional Emergency Preparedness Committee, Chair Dieringer adjourned the meeting at 8:15 a.m. The next meeting is scheduled to be held on Thursday, May 13, 2021, beginning at 7:30 a.m.

Respectfully submitted,

Elaine Jeng, P.E. City Manager/Acting City Clerk City of Rolling Hills

Approved,

Bea Dieringer Chair and Mayor, City of Rolling Hills









#### PENINSULA PUBLIC SAFETY COMMITTEE AGENDA REPORT AGENDA TITLE:

MEETING DATE: 05/13/2021 AGENDA HEADING: New Business

Presentation of an After-Action Review for the Peninsula Regional Coordination Tabletop Emergency Preparedness Exercise

#### **RECOMMENDED COMMITTEE ACTION:**

(1) Receive and file a draft of the Palos Verdes Peninsula Regional Coordination Tabletop Exercise After Action Review and provide further direction to staff.

STAFF COORDINATOR: Jesse Villalpando, Emergency Services Coordinator T. N.

#### ATTACHED SUPPORTING DOCUMENTS:

A. Draft of the Peninsula Regional Coordination Tabletop Exercise After Action Review

#### **BACKGROUND AND DISCUSSION:**

On February 25, 2021, a Peninsula wide Virtual Emergency Preparedness Tabletop Exercise was conducted in coordination with the four Peninsula Cities of Rancho Palos Verdes, Palos Verdes Estates, Rolling Hills, Rolling Hills Estates. This Tabletop Exercise also included participation by public safety agencies such as the Los Angeles County Fire Department, the Los Angeles County Sheriff's Lomita Station, and the Palos Verdes Estates Police Department.

This exercise was designed to improve coordination, communication, and response efforts among Peninsula Cities and first responder agencies that will work collaboratively in the event of a disaster affecting the Palos Verdes Peninsula.

#### The exercise's primary objective was as follows:

- **Situational Assessment:** Discuss best practices in the gathering of information sufficient to inform decision making regarding immediate lifesaving and life-sustaining activities, amongst engaged municipal and first responder resources within and outside of the affected area to meet basic human needs and stabilize the incident.
- **Operational Communication:** Discuss best practices for timely communications in support of security situational awareness, and operations by any and all means available, among and between the Peninsula Cities, first responders and affected communities in the impacted area.

• **Operational Coordination:** Discuss the ability to establish an effective command structure that integrates the Peninsula Cities to ensure community resources are used efficiently to respond to a Peninsula wide evacuation.

The City of Rancho Palos Verdes' Emergency Services Coordinator has completed an After-Action Review for the Tabletop Exercise, which highlights lessons learned and identifies recommendations to be made to the Peninsula Cities emergency response planning efforts. This report is intended to serve as an asset to further enhance the Peninsula Cities ability to respond effectively and minimize life and property loss to disasters faced by the City.



## PALOS VERDES PENINSULA REGIONAL COORDINATION TABLETOP EXERCISE



February 25, 2021



## **AFTER ACTION REVIEW**

**FEBRUARY 25, 2021** 

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# INTRODUCTION

On February 25, 2021, certain staff from the four Peninsula Cities participated in a virtual tabletop exercise with regional first responder partners. This Tabletop exercise scenario was based on a brushfire in the Northwest portion of the Portuguese Bend Reserve and subsequent evacuation of a significant portion of the Palos Verdes Peninsula Community.

The exercise was held from 9:00 am to 11:00 am and was conducted in coordination with the four Peninsula Cities of Rancho Palos Verdes, Palos Verdes Estates, Rolling Hills, Rolling Hills Estates as well as with Public safety agencies including the Los Angeles County Fire Department, Los Angeles County Sheriff's Lomita Station, and the Palos Verdes Estates Police Department.

This exercise was conducted to enhance coordination, communication, and response efforts among the Peninsula Cities and first responder agencies that will work together during a disaster that would impact the Palos Verdes Peninsula. The primary objective during the exercise were the following:

- **Situational Assessment:** Discuss best practices in the gathering of information sufficient to inform decision making regarding immediate lifesaving and life-sustaining activities, amongst engaged municipal and first responder resources within and outside of the affected area to meet basic human needs and stabilize the incident.
- **Operational Communication:** Discuss best practices for timely communications in support of security situational awareness, and operations by any and all means available, among and between the Peninsula Cities, first responders and affected communities in the impacted area.
- **Operational Coordination:** Discuss the ability to establish an effective command structure that integrates the Peninsula Cities to ensure community resources are used efficiently to respond to a Peninsula wide evacuation.

The Palos Verdes Peninsula Regional Coordination Tabletop Exercise consisted of two Modules that focused on response operations. Each Module consisted of a scenario overview and facilitated discussion questions.

#### The Two Exercise Modules Included:

 Module 1: Focused on initial response operations during a Wildfire incident, including initial notifications, resources needed, priorities, and EOC situational awareness.  Module 2: Focused on first responder operations in responding to a wildfire incident and establishing a common operational picture between first responders in the field and the Peninsula Cities' Emergency Operations Centers to ensure community resources are used efficiently to respond to a Peninsula wide evacuation.

Based on the lessons learned and identified in this report significant adjustments and improvements will be made to overall Peninsula Cities emergency response planning efforts. This report is intended to serve as an asset to further enhance the Peninsula Cities ability to respond effectively and minimize life and property loss to disasters faced by the City.

## **EXERCISE AGENDA**

9:00 - 9:10	Start of Exercise/Initial Briefing
9.10-9.15	Module 1: Situational Assessment/ Operational
5.10-5.15	Communication
9:15 –10:00	Module 1 Discussion Areas
10:00-10:05	Module 2: Operational Coordination
10:05-10:50	Module 2-Discussion Areas
10:50-11:30	Hotwash/Next steps
11:30 A.M.	TTX Complete

Exercise Overview		
Exercise Name	Palos Verdes Peninsula Regional Coordination Tabletop Exercise	
Exercise Date	February 25, 2021; 9:00 a.m. – 11:30 a.m.	
Scope	This exercise was a discussion-based exercise using the Zoom platform	
Mission Areas	Response	
Core Capabilities	Situational Assessment, Operational Communications, Operational Coordination	
	<b>Situational Assessment:</b> Discuss best practices in the gathering of information sufficient to inform decision making regarding immediate lifesaving and life-sustaining activities, amongst engaged municipal and first responder resources within and outside of the affected area to meet basic human needs and stabilize the incident.	
Objectives	<b>Operational Communication:</b> Discuss best practices for timely communications in support of security situational awareness, and operations by any and all means available, among and between the Peninsula Cities, first responders and affected communities in the impacted area.	
	<b>Operational Coordination:</b> Discuss the ability to establish an effective command structure that integrates the Peninsula Cities to ensure community resources are used efficiently to respond to a Peninsula wide evacuation.	
Scenario	The exercise scenario will include a wildfire event resulting in the evacuation of a significant portion of the Palos Verdes Peninsula Community.	
Participating Groups/Departme nts	City of Palos Verdes Estates, City of Rancho Palos Verdes, City of Rolling Hills, City of Rolling Hills Estates, Los Angeles County Fire Department, Los Angeles County Sheriff's Department Lomita Station, Palos Verdes Estates Police Department	
Sponsoring Organization	City of Rancho Palos Verdes	
Point of Contact	<b>Jesse Villalpando</b> Emergency Services Coordinator, City of Rancho Palos Verdes (310) 544-5209, Jvillalpando@rpvca.gov	

### **Scenario Narrative**

On Sunday, July 4, 2021 at 2:24 P.M. A brush fire was reported in the Northwest portion of the Portuguese Bend Reserve. Santa Ana weather conditions had temperatures at 90 degrees, and winds blowing at 30 – 40 MPH with 60 MPH gusts in the canyons in a Northwest direction. Before arriving on scene, responding LA County Fire officers request an upgrade to a full brush response, and within minutes it has become clear that this will be a big event and has been given the name the "Portuguese Bend Reserve Fire." The Los Angeles County Fire Incident Command predicted that the fire will be threatening homes within hours impacting the neighborhoods in the cities of Rolling Hills, Rolling Hills Estates and Rancho Palos Verdes.



#### MAP OF IMPACTED AREA

### Module 1: Initial Response

#### TIMELINE OF SIGNIFICANT INCIDENT EVENTS

The following timeline of significant events for the first module of the exercise (Initial response) is numbered and timestamped for easy reference:

#### Sunday, July 4, 2021

#### Weather/Fire Conditions: Forecast and Preparation:

- **Significant Event 1:** The National Weather Service predicts peak fire-event forecast over the Fourth of July Holiday weekend into the predawn hours on Monday. Strongest winds predicted to occur Sunday afternoon night through Monday morning.
- **Significant Event 2:** Santa Ana weather conditions have temperatures at 90 degrees, and winds blowing at 30 40 MPH with 60 MPH gusts in the canyons in a Northwest direction.
- **Significant Event 3:** Significant Wildfires have ignited in Monterey and Ventura County California and are expanding in size at an unprecedented rate. Statewide firefighting resources have shifted to address the growing threat of these fires severely limiting available firefighting resources.

#### FIRE CONDITIONS/RESPONSE: INITIAL OBSERVATIONS

- **Significant Event 4: 2:20PM –** In celebration of the Fourth of July Holiday, two individuals set off ariel fireworks at their home bordering the Portuguese Bend Reserve, unknowingly igniting a small brush fire in the Reserve.
- Significant Event 5: 2:24PM The Los Angeles County Fire Department receives a call for service for a smoke check in the Northwest portion of the Portuguese Bend Reserve. Before arriving on scene, responding LA County Fire officers requests an upgrade to a full brush response, within minutes it has become clear that this will be a big event and has been given the name the "Portuguese Bend Reserve Fire."
- **Significant Event 6: 2:51 PM** A Los Angeles County Fire helicopter arrives on scene and reports a 25-acre fire with rapid rate of spread and structures threatened.

- **Significant Event 7: 3:00 PM** The Los Angeles County Fire Incident Command is predicting that the fire will be threatening homes within hours impacting the neighborhoods in the cities of Rolling Hills, Rolling Hills Estates and Rancho Palos Verdes.
- **Significant Event 8: 3:40 PM -** Los Angeles County Fire officers establish an Incident Command Post (ICP) at the LA County Fire Station #56 in Rolling Hills and begin to build an evacuation contingency plan.
- **Significant Event 9: 4:15 PM** The Los Angeles County Fire Department notifies the Peninsula Cities in the LA County Fire service area to inform them of voluntary evacuations orders for the neighborhoods between Highridge Rd to the West and Palos Verdes Drive North to the East.
- **Significant Event 10. 4:16 PM** As a result of the voluntary evacuation orders the Lomita Sheriff's Station activates its emergency operations center (EOC), its 12-and-12 staffing model, and the station begins to initiate voluntary evacuations in the impacted areas.

#### **KEY ISSUES**

#### The following key issues accompanied the first module of the exercise scenario:

- As many as 8,000 people will need to evacuate the impacted area.
- There is heavy holiday traffic going in both directions on Hawthorne Blvd, Palos Verdes Drive North and Crenshaw Blvd.
- Hundreds of sightseers clogged nearby roads, including Highridge, Crest Roads, in an attempt to view the blaze.
- A significant amount of smoke and ash is billowing in a Northwest direction from the fire resulting in extremely poor Air quality.
- In an attempt to circumvent traffic a significant number of evacuees are streaming into the residential streets and neighborhoods in the City of Palos Verdes Estates.
- Due to flying embers, numerous small brushfires begin igniting in the City of Palos Verdes Estates and Rancho Palos Verdes.
- Due to the Fourth of July Weekend numerous City Employees are unreachable or have traveled out of town.

#### **DISCUSSION QUESTIONS**

CORE CAPABILITY:

Situational Assessment

#### EXERCISE OBJECTIVE:

Discuss best practices in the gathering of information sufficient to inform decision making regarding immediate lifesaving and life-sustaining activities, amongst engaged municipal and first responder resources within and outside of the affected area to meet basic human needs and stabilize the incident.

- 1. Who are the key staff, community partners and stakeholders that your City will need to be contacted immediately following this incident?
- 2. What triggers are/should be included within our Cities emergency plans to initiate response actions? What types of preparatory actions should be done? What can be accomplished with current systems?
- 3. How would your City go about obtaining accurate situational awareness of the scope, complexity, and potential impact of the incident?
- 4. What Initial resources are needed for your City to properly respond to the incident?
- 5. What are your City's top 1-3 priority actions right now?

CORE CAPABILITY:	Operational Communication
EXERCISE OBJECTIVE:	Discuss best practices for timely communications in support of security situational awareness, and operations by any and all means available, among and between the Peninsula Cities, first responders and affected communities in the impacted area.

- 1. How would your City communicate with staff, residents, elected officials and neighboring Peninsula Cities at this point? What methods of communication would you use? Who would be responsible?
- 2. What information are you able to share with neighboring Cities and residents?
- 3. What are your Cities public affairs concerns? Who is responsible for coordinating the public message?

#### **KEY FINDINGS AND RECOMMENDATIONS**

This section discusses the key findings from the Peninsula Cities discussion revolving around the core capabilities of Situational Assessment and Operational Communication in response to the exercise scenario and discussion questions presented to the Cities during the first module of the Exercise:

#### STRENGTHS

- **Strength 1:** Participant's value and understand the importance of emergency management and EOC training.
- **Strength 2:** Participants were well-versed in the immediate actions that their City must take upon initial notification of an incident.
- **Strength 3:** Participants identified the importance of collaborating and communicating with community partners in responding to the

incident and were able to identify all relevant partners and resources needed to effectively respond to a wildfire incident.

- **Strength 4:** Participants where well versed on which key staff and resources are needed for their City to properly respond to the incident.
- **Strength 5:** Participants identified and discussed wide array of communication strategies that could be implemented to engage public and community partners to support activities related to public health threat, including website updates, social media messages, signage, and email list-servs.
- **Strength 6:** Participants had an overall awareness and knowledge of their Cities emergency notification systems, and implementation process for notifying their respective communities
- **Strength 7:** The Palos Verdes Peninsula Cities have had numerous experiences in the sharing of information and collaborating amongst the Peninsula Cities throughout an emergency event.

#### MAJOR OBSERVATIONS

- 1. OBTAINING TIMELY AND ACCURATE INFORMATION FROM EMERGENCY RESPONDERS IS CRITICAL DURING A WILDFIRE INCIDENT AND IS SUSCEPTIBLE TO POTENTIAL DIFFICULTIES AS AN EVENT GROWS IN COMPLEXITY AND SIZE. City officials noted that they previously have encountered challenges with situational awareness and intelligence gathering during brush fire incidents on the Palos Verdes Peninsula. Historically, participants noted that they have contacted Law Enforcement partners for situational updates on an unfolding event.
- 2. IT IS CRITICAL TO HAVE A STANDARDIZED PROTOCOL FOR NOTIFYING CITY LEADERS AND STAFF OF AN IMPENDING WILDFIRE INCIDENT. Participants indicated that they have received notifications about prior brush fire incidents via the emergency notifications feature of the PulsePoint app.
- 3. PHYSICAL ACCESS FOR KEY CITY OFFICIALS AND STAFF TO AN INCIDENT COMMAND POST OR A CITY'S EMERGENCY OPERATIONS CENTER (EOC) MAY BE SEVERELY RESTRICTED AS A RESULT OF LAW ENFORCEMENT PERSONNEL ENFORCING EVACUATION ORDERS. Exercise participants discussed having difficulty accessing previously established incident command posts due to Law Enforcement personnel restricting access to the scene.
- 4. PARTICIPANTS STRESSED THE IMPORTANCE FOR THE FOUR PENINSULA CITIES TO DEVELOP AND DISSEMINATE COORDINATED AND CONSISTENT MESSAGING TO RESIDENTS. City Leaders stressed the importance of robust and consistent information sharing throughout the Peninsula Cities.

- 5. PARTICIPATES NOTED THE POTENTIAL DIFFICULTIES IN INFORMATION DISSEMINATION REACHING ALL POPULATIONS WITHIN THE PALOS VERDES PENINSULA DURING A WILDFIRE INCIDENT. The Peninsula Cities currently rely heavily on Everbridge notifications, which require users to opt in. Participants identified the need to explore a public education program that encourages residents and businesses to sign up for Everbridge notifications.
- 6. PARTICIPANTS NOTED ESTABLISHED PUBLIC INFORMATION NOTIFICATION PROCESS BY PUBLIC SAFETY AGENCIES AND DISCUSSED THE NEED FOR COLLABORATION BETWEEN CONTRACTED COUNTY LAW ENFORCEMENT AND FIRE PUBLIC INFORMATION OFFICERS AND THE PENINSULA CITIES.

#### RECOMMENDATIONS

- **Recommendation1:** Establish a group text between the four Peninsula City Mangers, key City staff and representatives from the Los Angeles County Fire Department to centralize information gathering and situational awareness for a wildfire incident. **Recommendation 2:** Pre-identify a City representative with the ability to make decisions on behalf of their City to physically report to an established Incident Command Post (ICP) to serve as a liaison to the City's Emergency Operations Centers during a wildfire incident. **Recommendation 3:** Further exploration is needed to establish a universal method for essential personnel (e.g., elected officials, City personnel, CERT members, and other critical service providers) to enter/exit their City during a mandatory evacuation order. **Recommendation 4:** Formulize the position and MOU between the four Peninsula Cities for the sharing of an emergency services coordinator to serve as one point of contact for the Peninsula Cities.
- **Recommendation 5:** Establish EOC recall procedures, including alternate forms of notification (text message, phone calls etc.) with phone lists and rosters with primary and back-up phone numbers for all employees.
- **Recommendation 6:** Establish communication protocols from City Mangers to their City's Emergency Services Coordinator to ensure equal access to critical information.

- **Recommendation 7:** Review existing communications protocols established through the Regional Law Committee and formally adopt a Crisis Communications Protocols between the four Peninsula Cities to ensure the development of consistent and coordinated messaging to the media, general public, and the private sector.
- **Recommendation 8:** Preestablish procedures for the formation of a Joint Information Center between the four Peninsula Cities to facilitate coordinated and timely messaging among all agencies and to the public.
- **Recommendation 9:** Formalize mutually supportive relationships between the Peninsula Cities staff responsible for public messaging and the County of Los Angeles Fire Department and Los Angeles County Sheriff Department's Public Information Officers.
- **Recommendation 10:** Conduct a campaign to encourage residents and businesses to sign up for Alert SouthBay notifications.

## **MODULE 2: OPERATIONAL COORDINATION**

#### TIMELINE OF SIGNIFICANT INCIDENT EVENTS

The following timeline of significant events for the second module of the exercise (Initial response) is numbered and timestamped for easy reference:

#### Sunday, July 4, 2021

#### Weather/Fire Conditions: Forecast and Preparation:

#### Scenario Update

Significant Event 11:	<b>6:47 PM</b> – Sunset occurs and only two fixed-wing aircraft drops are accomplished before a sunset curfew discontinues fixed-wing aircraft operations. LA County Fire helicopters continue to operate to the end of dusk, and their night-capable helicopters continued through the night.
Significant Event 12:	<b>7:00 PM</b> – Command personnel from LA County Fire conduct a night flight in a helicopter to assess the situation's rapidly evolving fire dynamics.
Significant Event 13:	<b>7:33 PM-</b> The Peninsula Cities receive notifications from LA County Fire stating that the fire is now at 800 acres with no containment, and that Mandatory evacuations orders are now being issued for the neighborhoods between Palos Verdes Drive West to the West and Palos Verdes Drive East to the East and Palos Verdes Drive South to the South.

#### **KEY ISSUES**

#### The following key issues accompanied the first module of the exercise scenario:

- This incident is now in Unified Command with the following Public Safety Agencies: Los Angeles County Fire Department, Torrance Fire Department Redondo Beach Fire Department, City of Los Angeles Fire Department, Los Angeles County Sheriff's Department, Palos Verdes Estates Police Department, Torrance Police Department, Los Angeles Police Department and Cal Fire
- Information and updates to the Peninsula Cities from the Incident Command Post are scarce and conflicting.
- Local media outlets are beginning to provide coverage of the event and begin reporting on social media posts as the event unfolds. Conflicting

information is being reported on various networks to include reports of burned down homes and a lack of communication from the Cities.

- Heavy evacuation traffic is going in both directions on Hawthorne Blvd, Palos Verdes Drive North, Crenshaw Blvd and nearby roads, including Highridge, Crest and Crestridge roads.
- Numerous responding key City staff are reporting that they are unable to drive onto the Peninsula do to roadblocks by law enforcement.

#### Discussion Questions

CORE CAPABILITY:	Operational Coordination:
EXERCISE OBJECTIVE:	Discuss the ability to establish an effective command structure that integrates the Peninsula Cities to ensure community resources are used efficiently to respond to a Peninsula wide evacuation.

- 1. What resources will be needed by first responders by the Peninsula Cities in support of evacuations?
- 2. How would your City coordinate resource with the neighboring Peninsula Cities and first responders?
- 3. How would you City go about maintaining a Common Operational Picture between first responders in the field and your City's emergency operations center?
- 4. What are some resource gaps that could limit the Peninsula Cities and first responder's ability to respond to a wildfire evacuation?
- 5. What additional considerations should Peninsula Cities take into account in wildfire response planning?

#### KEY RESULTS FROM DISCUSSION

The discussion in particular included the following considerations and identified action items and challenges:

#### STRENGTHS

- **Strength 8:** Law enforcement and fire agencies are well trained and highly qualified to organize and implement evacuations during a wildfire emergency.
- **Strength 9:** The Peninsula Cities are well versed and experienced in communicating critical information with their community members.
- **Strength 10:** The Peninsula Cities staff have a great understanding and appreciation of terrain challenges, density issues, traffic and circulation patterns and vulnerable populations.

#### MAJOR OBSERVATIONS

- 1. DURING AN EMERGENCY, LAW ENFORCEMENT AND FIRE AGENCIES ARE RESPONSIBLE FOR ORGANIZING AND IMPLEMENTING EVACUATIONS. Participants clarified that typically, Fire Agencies determine where and when an evacuation should occur at the Incident Command Post and Law Enforcement Agencies implement the evacuation plan.
- 2. PARTICIPANTS NOTED THE IMPORTANCE OF TAKING SHELTERING CONSIDERATIONS DURING A MASS EVACUATION IN EMERGENCY PLANNING EFFORTS. Participants discussed the Peninsula Cities responsibility of sheltering residents during a mass evacuation event and the need for preidentified sheltering locations outside of the Palos Verdes Peninsula.
- 3. THE PENINSULA CITIES EMERGENCY PLANS CURRENTLY ADDRESS SECONDARY EOC LOCATIONS ON THE PALOS VERDES PENINSULA. Participants discussed the need for preidentified EOC Locations outside of the Palos Verdes Peninsula that will not be impacted by mandatory evacuation orders

#### RECOMMENDATIONS

- **Recommendation 11:** Designate formal alternative sites with reliable communication systems for an Emergency Operations Center (EOC) outside of City limits.
- **Recommendation 12:** Explore development of a joint Emergency Operations Center (EOC) location in partnership with all four Peninsula Cities.
- **Recommendation 13:** Create disaster preparedness information to be distributed to all City residents and visitors through all media outlets, explaining specifications to be followed if evacuations are directed by public safety officials.
- **Recommendation 14:** Conduct an educational campaign to encourage residents and businesses to know their alternate evacuation routes.
- **Recommendation 15:** Establish protocols with first responder agencies to ensure City staff members participate in repopulation planning efforts to ensure plans adequately address the unique needs and conditions of the Palos Verdes Peninsula.
- **Recommendation 16:** Further coordination is needed amongst the Palos Verdes Peninsula Cities and first responder agencies, to develop contingent evacuation approaches and identification of safe refuge areas to optimize evacuation flow for different fire conditions.

### **IMPROVEMENT PLAN MATRIX**

OBSERVATIONS	RECOMMENDATIONS
OBTAINING TIMELY AND ACCURATE INFORMATION FROM EMERGENCY RESPONDERS IS CRITICAL	PRE-IDENTIFY A CITY REPRESENTATIVE WITH THE ABILITY TO MAKE DECISIONS ON BEHALF OF THEIR CITY TO PHYSICALLY REPORT TO AN ESTABLISHED INCIDENT
DURING A WILDFIRE INCIDENT AND IS SUSCEPTIBLE TO POTENTIAL DIFFICULTIES AS AN EVENT GROWS IN	COMMAND POST (ICP) TO SERVE AS A LIAISON TO THE CITY'S EMERGENCY OPERATIONS CENTERS DURING A WILDFIRE INCIDENT.
COMPLEXITY AND SIZE.	
IT IS CRITICAL TO HAVE A STANDARDIZED PROTOCOL FOR NOTIFYING CITY LEADERS AND STAFF OF AN IMPENDING WILDFIRE INCIDENT.	ESTABLISH A GROUP TEXT BETWEEN THE FOUR PENINSULA CITY MANGERS, KEY CITY STAFF AND REPRESENTATIVES FROM THE LOS ANGELES COUNTY FIRE DEPARTMENT TO CENTRALIZE INFORMATION GATHERING AND SITUATIONAL AWARENESS FOR A WILDFIRE INCIDENT.
PHYSICAL ACCESS FOR KEY CITY OFFICIALS AND STAFF TO AN INCIDENT COMMAND POST OR A CITY'S EMERGENCY OPERATIONS CENTER (EOC) MAY BE SEVERELY RESTRICTED AS A RESULT OF LAW ENFORCEMENT PERSONNEL ENFORCING EVACUATION ORDERS.	FURTHER EXPLORATION IS NEEDED TO ESTABLISH A UNIVERSAL METHOD FOR ESSENTIAL PERSONNEL (E.G., ELECTED OFFICIALS, CITY PERSONNEL, CERT MEMBERS, AND OTHER CRITICAL SERVICE PROVIDERS) TO ENTER/EXIT THEIR CITY DURING A MANDATORY EVACUATION ORDER

	FORMULIZE THE POSITION AND MOU BETWEEN THE FOUR PENINSULA CITIES FOR THE SHARING OF AN EMERGENCY SERVICES COORDINATOR TO SERVE AS ONE POINT OF CONTACT FOR THE PENINSULA CITIES.
PARTICIPANTS STRESSED THE IMPORTANCE FOR THE	REVIEW EXISTING COMMUNICATIONS PROTOCOLS ESTABLISHED THROUGH THE
FOUR PENINSULA CITIES TO DEVELOP AND	REGIONAL LAW COMMITTEE AND FORMALLY ADOPT A CRISIS COMMUNICATIONS
DISSEMINATE COORDINATED AND CONSISTENT	PROTOCOLS BETWEEN THE FOUR PENINSULA CITIES TO ENSURE THE
MESSAGING TO RESIDENTS.	DEVELOPMENT OF CONSISTENT AND COORDINATED MESSAGING TO THE MEDIA,
	GENERAL PUBLIC, AND THE PRIVATE SECTOR.
	CONDUCT A CAMPAIGN TO ENCOURAGE RESIDENTS AND BUSINESSES TO SIGN UP
	FOR ALERT SOUTHBAY NOTIFICATIONS.

PARTICIPATES NOTED THE POTENTIAL DIFFICULTIES IN	PREESTABLISH PROCEDURES FOR THE FORMATION OF A JOINT INFORMATION
INFORMATION DISSEMINATION REACHING ALL	CENTER BETWEEN THE FOUR PENINSULA CITIES TO FACILITATE COORDINATED
POPULATIONS WITHIN THE PALOS VERDES	AND TIMELY MESSAGING AMONG ALL AGENCIES AND TO THE PUBLIC.
PENINSULA DURING A WILDFIRE INCIDENT.	

PARTICIPANTS NOTED ESTABLISHED PUBLIC	FORMALIZE MUTUALLY SUPPORTIVE RELATIONSHIPS BETWEEN THE PENINSULA
INFORMATION NOTIFICATION PROCESS BY PUBLIC	CITIES STAFF RESPONSIBLE FOR PUBLIC MESSAGING AND THE COUNTY OF LOS
SAFETY AGENCIES AND DISCUSSED THE NEED FOR	ANGELES FIRE DEPARTMENT AND LOS ANGELES COUNTY SHERIFF DEPARTMENT'S
COLLABORATION BETWEEN CONTRACTED COUNTY	PUBLIC INFORMATION OFFICERS.
LAW ENFORCEMENT AND FIRE PUBLIC INFORMATION	
OFFICERS AND THE PENINSULA CITIES.	

	FURTHER COORDINATION IS NEEDED AMONGST THE PALOS VERDES PENINSULA
	CITIES AND FIRST RESPONDER AGENCIES, TO DEVELOP CONTINGENT EVACUATION
	APPROACHES AND IDENTIFICATION OF SAFE REFUGE AREAS TO OPTIMIZE
DURING AN EMERGENCY, LAW ENFORCEMENT AND	EVACUATION FLOW FOR DIFFERENT FIRE CONDITIONS.
FIRE AGENCIES ARE RESPONSIBLE FOR ORGANIZING	
AND IMPLEMENTING EVACUATIONS	CREATE DISASTER PREPAREDNESS INFORMATION TO BE DISTRIBUTED TO ALL CITY
	RESIDENTS AND VISITORS THROUGH ALL MEDIA OUTLETS, EXPLAINING
	SPECIFICATIONS TO BE FOLLOWED IF EVACUATIONS ARE DIRECTED BY PUBLIC
	SAFETY OFFICIALS.

PARTICIPANTS NOTED THE IMPORTANCE OF TAKING SHELTERING CONSIDERATIONS DURING A MASS EVACUATION IN EMERGENCY PLANNING EFFORTS.	CONDUCT AN EDUCATIONAL CAMPAIGN TO ENCOURAGE RESIDENTS AND BUSINESSES TO KNOW THEIR ALTERNATE EVACUATION ROUTES.
	ESTABLISH PROTOCOLS WITH FIRST RESPONDER AGENCIES TO ENSURE CITY STAFF MEMBERS PARTICIPATE IN REPOPULATION PLANNING EFFORTS TO ENSURE PLANS ADEQUATELY ADDRESS THE UNIQUE NEEDS AND CONDITIONS OF THE PALOS VERDES PENINSULA.

THE PENINSULA CITIES EMERGENCY PLANS	DESIGNATE FORMAL ALTERNATIVE SITES WITH RELIABLE COMMUNICATION
CURRENTLY ADDRESS SECONDARY EOC LOCATIONS	SYSTEMS FOR AN EMERGENCY OPERATIONS CENTER (EOC) OUTSIDE OF CITY
ON THE PALOS VERDES PENINSULA.	LIMITS.
	EXPLORE DEVELOPMENT OF A JOINT EMERGENCY OPERATIONS CENTER (EOC)
	LOCATION IN PARTNERSHIP WITH ALL FOUR PENINSULA CITIES.









#### PENINSULA PUBLIC SAFETY COMMITTEE AGENDA REPORT AGENDA TITLE:

MEETING DATE: 05/13/2021 AGENDA HEADING: New Business

Presentation on a draft of the Peninsula White Paper on utility companies' response to a disaster.

#### **RECOMMENDED COMMITTEE ACTION:**

(1) Receive and file a draft of the Peninsula White Paper on utility companies' response to a disaster and provide further direction to Staff.

STAFF COORDINATOR: Jesse Villalpando, Emergency Services Coordinator T. V.

#### ATTACHED SUPPORTING DOCUMENTS:

A. Draft of White Paper on Interdependency Vulnerabilities' of Utilities Servicing The Palos Verdes Peninsula

#### BACKGROUND AND DISCUSSION:

At its meeting on November 12, 2020, the Peninsula Public Safety Committee (PPSC) was provided with a high-level update on the status of the creation of a White Paper that examines the interrelationship vulnerabilities between power, water, gas and sewer utilities servicing the Palos Verdes Peninsula, as well as outlining the potential consequences that could result from cascading and escalating failures of these utilities.

During this meeting, the City of Rancho Palos Verdes Emergency Services Coordinator identified the following six-tiered framework for the drafting of this White Paper:

- Identification of Primary Contacts and Stakeholders
- Review of Relevant Policies & Plans
- Identification of Critical Facilities & Infrastructure
- Assessment of Utility Interrelationship Vulnerabilities
- Development of a Crisis Communications Protocol
- Integration with Peninsula Cities Emergency Operations Plans

On February 11, the Peninsula Public Safety Committee (PPSC) reviewed a preliminary draft of this Whitepaper, analyzing the interdependencies vulnerabilities of infrastructure utilities and provided direction to Staff to incorporate suggested changes. A copy of revised draft of this Whitepaper is included in this report as Attachment A.

#### **Current Status**

As of the writing of this staff report, Staff has completed a revised draft of this Whitepaper, analyzing the interdependencies vulnerabilities of infrastructure utilities servicing the residents of the Palos Verdes Peninsula. This draft of the whitepaper currently highlights historically known interdependencies of the critical infrastructure sector as well as evaluates the potential effects of the failure of these utilities.

This current draft of this whitepaper uses a "Top-Down" approach to infrastructure interdependency analysis by outlining the following: (1) Overall on critical infrastructure system functions in general; (2) Background on the physical infrastructure sectors located in the community (3) the interdependencies between that sector and other critical infrastructure system. (4) and the potential consequences that could result from cascading failures.

The following four critical infrastructure sectors servicing the Palos Verdes Peninsula are currently analyzed in this white Paper:

- $\Rightarrow$  Electricity (Energy Sector)
- $\Rightarrow$  Natural Gas (Energy Sector)
- $\Rightarrow$  Telecommunications Systems (Communication Sector)
- $\Rightarrow$  Information Systems (Communication Sector)
- $\Rightarrow$  Water systems (Water Sector)
- $\Rightarrow$  Wastewater systems (Water and Wastewater Sector)

This whitepaper serves as an initial framework for recognizing interdependencies in the analysis of critical infrastructures and is intended to provide a foundational understanding of infrastructure interdependencies.

#### Next Steps

The next steps for the completion of this whitepaper include the development of a crisis communications protocol and the integration of analysis findings in emergency planning considerations for the Palos Verdes Peninsula. Notwithstanding, staff continues to work diligently for the completion of this whitepaper for finalization and adoption by the Committee during the August 12, 2021 Committee meeting.

**INFRASTRUCTURE INTERDEPENDENCY VULNERABILITIES ASSESSMENT** PALOS VERDES PENINSULA



MAY 2021

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### EXECUTIVE SUMMARY

This White Paper was developed as a result of the four Peninsula Cities of Palos Verdes Estates, Rancho Palos Verdes, Rolling Hills, and Rolling Hills Estates' efforts to ensure a constant state of preparedness to provide uninterrupted services to their respective communities, before, during and after an emergency event. The City of Rancho Palos Verdes led the development of this White Paper as a result of the Palos Verdes Peninsula Public Safety Committee's direction in exploring the potential effects of cascading failures of critical utility systems servicing the Palos Verdes Peninsula due to their interdependencies vulnerabilities.

The Palos Verdes Peninsula communities' comfort and security rests upon a myriad of highly interdependent critical infrastructure sectors that currently provide essential everyday services. Critical infrastructure consists of a large number of sectors, including the electric power grid, natural gas production, water and water waste systems as well as telecommunications and information systems. These infrastructure systems depend upon extensive interconnections and are part of a "system of systems"<sup>1</sup> that ensures the quality of life for the entire Palos Verdes Peninsula Community.

Consequences resulting from one infrastructure sector failing can generate cascading failures across the entire infrastructure systems. The location of critical infrastructure lifelines is typically not shared among different utility operators, thus resulting in a majority of these infrastructures placements being unknown.<sup>2</sup> The colocation of multiple lifelines also increases the likelihood that failure in one system can damage and interrupt others. Severe disruption of one section of the critical infrastructures sector caused by natural or manmade disasters, can cause undue damage to the security and sustainable living of a community. Because of the essential role the infrastructure sector plays and the ability for its failure to cause severe disruption to a society's stability, the understanding of interdependencies among these critical infrastructure systems is essential in ensuring the resilience of a local community.

The goal of this project is to support long-term emergency planning for the Peninsula Cities through an infrastructure interdependency vulnerability assessment, contributing to the resiliency of the Palos Verdes Peninsula community.

#### **PROJECT OBJECTIVES**

The following five objectives were established at the outset of the Whitepaper Project:

- ⇒ Identification of critical facilities & infrastructure
- $\Rightarrow$  Identification of primary critical infrastructure contacts and stakeholders
- $\Rightarrow$  Assessment of utility interrelationship vulnerabilities
- $\Rightarrow$  Development of a crisis communications protocol
- $\Rightarrow$  Integration with Peninsula cities emergency operations plan

1. S. M. Rinaldi, J. P. Peerenboom and T. K. Kelly, 2001, "Identifying, understanding, and analyzing critical infrastructure interdependencies,

https://www.researchgate.net/profile/James\_Peerenboom/publication/3206740\_Identifying\_understanding\_and\_analyzing \_critical\_infrastructure\_interdependencies/links/5628c9fa08aef25a243d2137/Identifying-understanding-and-analyzing-criticalinfrastructure-interdependencies.pdf

National Institute Of Standards And Technology (NIST), 2016, "Critical assessment of lifeline system performance: Understanding societal needs in disaster recovery http://dx.doi.org/10.6028/NIST.GCR.16-917-39

### **INTRODUCTION**

The four Cities consisting of the Palos Verdes Peninsula share similar geography, development patterns and exposure to similar types of natural hazards. Recognizing that greater efficiencies are possible when emergency preparedness occurs in a regionally coordinated manner the Peninsula Cities formed a Regional Emergency Preparedness Committee (REPC). The Regional Emergency Preparedness Committee (REPC) (now known as the Palos Verdes Peninsula Public Safety Committee) consists of two Council Members from each of the Peninsula Cities and meets on a quarterly basis to discuss collaborative efforts on ensuring Peninsula-wide emergency preparedness. The objective of the Palos Verdes Peninsula Public Safety Committee (PPSC) is to enhance emergency preparedness on the Peninsula by addressing joint preparedness efforts and responses to widespread disasters affecting the greater Peninsula region.

Following presentations from utility companies servicing the Peninsula, the Palos Verdes Peninsula Public Safety Committee (PPSC) expressed concern regarding the risks associated with the possible loss of power to critical infrastructure utilities servicing the Peninsula Community. In response to this concern, the Committee motioned for the City of Rancho Palos Verdes' Emergency Services Coordinator to take the lead in creating a White Paper that examines the interrelationship vulnerabilities of utilities servicing the Peninsula community.

The Critical infrastructure sector consists of thousands of electricity, oil, natural gas, and renewable energy assets that are geographically dispersed and connected by systems and networks.<sup>3</sup> The energy infrastructure sector is of most importance as the sector needs to be operating properly in order for all other sections of critical infrastructure, such as natural gas production, water and wastewater systems as well as telecommunications and information systems, to perform as needed. These other critical infrastructures are dependent on the energy sector to maintain functionality, and vice versa—that is, they are interdependent.

This White Paper will highlight historically known interdependencies of the critical infrastructure sector as well as evaluate the potential effects of the failure of these utilities. Utilizing potential cascading and escalating effects established by existing research and lessons learned on best practices in responding to utility failures, this study will recommend areas of improvement in the Integration of analysis findings into emergency planning considerations for the Palos Verdes Peninsula Communities. This paper will first discuss a general overview of how utilities currently provide services, then this paper will cover background on the physical infrastructure sectors located in the community, and the interdependencies between that sector and other critical infrastructure systems; and the potential consequences that could result from cascading and escalating failures.

Following this section, the paper will discuss the background of the community profile for the Palos Verdes Peninsula and the identification of critical infrastructure sectors.

<sup>3.</sup> Department of Energy and Department of Homeland Security, 2007, "Critical Infrastructure and Key Resources Sector- Specific Plan as input to the National Infrastructure Protection Plan (Redacted)", <u>https://energy.gov/sites/prod/files/oeprod/DocumentsandMedia/Energy\_SSP\_Public.pdf</u>

### COMMUNITY PROFILE

The Palos Verdes Peninsula is a geographic sub-region within southwestern Los Angeles County. The Palos Verdes Peninsula consists of Palos Verdes Estates, Rancho Palos Verdes, Rolling Hills, and Rolling Hills Estates. The City of Torrance borders the peninsula on the north, the Pacific Ocean is on the west and south, and the Port of Los Angeles is east. As of the 2010 Census, the population of the Palos Verdes Peninsula is 68,243.<sup>4</sup>

The Palos Verdes Peninsula's unique geography was formed over millions of years of volcanic activity, plate tectonics and terracing from changing sea levels. The nine-mile wide Peninsula, once an island, now rises above the Los Angeles Basin to a maximum of 1,480 feet, with uniquely terraced configurations and steep, rocky cliffs jutting upward 50 to 300 feet from the ocean formed over millions of years of submerging and lifting from the Pacific Ocean.



#### FIGURE 1: MAP OF THE FOUR PENINSULA CITIES

4. City of Rancho Palos Verdes, 2018, General Plan https://www.rpvca.gov/DocumentCenter/View/12625/2018-General-Plan

#### THREATS AND HAZARDS

The Peninsula Cities' Hazard Mitigation Plans<sup>5</sup> identify the following hazards posing a significant threat against the Palos Verdes Peninsula area:

- Earthquake
- Wildfire
- Earth Movement
- Tsunami
- Hazardous Materials
- Human-Caused Events
- Utility-Related Events

#### **CRITICAL FACILITIES**

**Critical Facilities** are essential to the health and welfare of the whole population and are especially important following hazardous events. The most critical municipal facilities for the Palos Verdes Peninsula are those that support public administration and emergency operations, police, fire, and emergency medical and emergency communications.

PENINSULA CITY	CITY HALL LOCATIONS	PHONE NUMBER
Palos Verdes Estates City Hall	340 Palos Verdes Drive West Palos Verdes Estates, CA 90274	310-378-0383
Rancho Palos Verdes City Hall	30940 Hawthorne Blvd. Rancho Palos Verdes, CA 90275	310-544-5200
Rolling Hills City Hall	2 Portuguese Bend Rd. Rolling Hills, CA 90274	310-377-1521
Rolling Hills Estates City Hall	4045 Palos Verdes Drive North Rolling Hills Estates, CA 90274	310-377-1577

#### TABLE 1: CITY HALL LOCATIONS FOR THE PENINSULA CITIES

#### **EMERGENCY SERVICES**

#### Law Enforcement Services:

The Cities of Rolling Hills, Rolling Hills Estates, and Rancho Palos Verdes jointly contract with the Los Angeles County Sheriff's Department for law enforcement services. The Lomita Sheriff Station provides police protection to the Peninsula Region. The City of Palos Verdes Estates has its own police department. Officers are assigned to different divisions such as traffic, patrol, and detectives. The city also has its own dispatch center and jail. Both are staffed 24 hours a day.

#### **Fire protection Services:**

Currently, the four Peninsula Cities contract with Los Angeles County for Fire Department for fire suppression, enforcement of the Fire Code, and paramedic services. Concurrently, Los Angeles County Fire also provides emergency ambulance service.

Type of Asset	Name	Address	Phone Number
Police (PVE)	Palos Verdes Estates Police Department	340 Palos Verdes Drive West Palos Verdes Estates, CA 90274	310-378-4211
Police (RPV, RH, RHE)	LA County Sheriff Department - Lomita Station	26123 Narbonne Ave, Lomita, CA 90717	310-539-1661
FIRE	LA County Fire Dept. Station 2	340 Palos Verdes Drive West Palos Verdes, CA 90274	310-373-6539
FIRE	LA County Fire Dept. Station 6	25517 S. Narbonne Ave. Lomita, CA 90717	310-326-2461
FIRE	LA County Fire Dept. Station 53	6124 PV Drive South RPV CA, 90275	310-377-3333
FIRE	LA County Fire Dept. Station 56	12 Crest Rd. West Rolling Hills, CA 90274	310-377-1584
FIRE	LA County Fire Dept. Station 83	83 Miraleste Plaza, Rancho Palos Verdes, CA 90275	310-831-4624
FIRE	LA County Fire Dept. Station 106	27413 Indian Peak Rd. Rolling Hills Estates, CA 90275	310-377-9523

#### TABLE 2: LOCATIONS OF FIRE AND POLICE STATIONS SERVICING THE PALOS VERDES PENINSULA

**Area Hospitals:** The Palos Verdes Peninsula has the following acute care hospitals in Torrance and San Pedro located approximately 15 minutes away (see Table 3, Area Hospitals).

#### TABLE 3: AREA HOSPITALS

Name	Address	Phone Number
Del Amo Hospital Torrance	23700 Camino Del Sol,	(310) 530-1151
	Torrance, CA 90505	(510) 550 1151
Harbor - UCLA Medical Center	1000 W Carson St,	(424) 306-4000
	Torrance, CA 90502	(424) 300 4000
Providence Little Company of Mary	4101 Torrance Blvd,	(310) 540-7676
Medical Center - Torrance	Torrance, CA 90503	(510) 540 7070
Providence Little Company of Mary Medical	1300 W 7th St,	(210) 822-2211
Center -San Pedro	San Pedro, CA 90732	(510) 852-5511
Terrence Memorial Medical Conter	3330 Lomita Blvd,	(210) 225 0110
	Torrance, CA 90505	(210) 252-2110

### IDENTIFYING INFRASTRUCTURE INTERDEPENDENCIES

Due to the complexity and highly interdependent nature of the critical infrastructure sectors currently providing essential services to the Peninsula Community, disruption of one section by natural or manmade disasters, can severely impact the security and sustainable living for the community. Due to the essential role that critical infrastructures play on society and the ability for its failure to causing severe disruption to societal stability, the understanding of interdependencies among critical infrastructure systems is essential in ensuring the resilience of a local community.

#### **DEFINING KEY TERMS:**

- **DEPENDENCY:** A dependency is a unidirectional relationship between two assets where the operations of one asset affects the operations of the other<sup>6</sup>. For example, a water treatment plant depends on communications services that support the supervisory control and data systems required to control plant operations.
- **INTERDEPENDENCY**: An Interdependency can be defined as a two-way relationship between two assets where the operations of both assets affect each other.<sup>6</sup> For example, water treatment plants require electricity for its data processing systems and, in turn, provides water that the communications system uses to cool its equipment.

## The interactions between critical infrastructure and its environment can be characterized into three categories:

- **UPSTREAM DEPENDENCIES:** The products or services provided to one infrastructure by another external infrastructure that are necessary to support its operations and functions<sup>7</sup>.
- **INTERNAL DEPENDENCIES:** The interactions among internal operations, functions, and missions of the infrastructure<sup>7</sup>. Internal dependencies are the internal links among the assets constituting a critical infrastructure (e.g., an electric generating plant that depends on cooling water from its own onsite water well).
- **DOWNSTREAM DEPENDENCIES:** The consequences to a critical infrastructure's consumers or recipients from the degradation of the resources provided by a critical infrastructure<sup>7</sup>.

<sup>6.</sup> James P. Peerenboom, Ronald E. Fisher, "Analyzing Cross- Sector Interdependencies,"40th Annual Hawaii International Conference on System Sciences (HICSS'07), 2007 <u>Http://www.computer.org/portal/web/csdl/doi?doc=doi/10.1109/HICSS.2007.78</u>

### APPROACHES TO CHARACTERIZING DEPENDENCIES

Each dependency has its own characteristics, therefore analyzing dependencies requires different approaches to successfully consider their category, class, and dimension(s). These approaches can generally be described as either top-down or bottom-up. Top-down approaches consist of analyzing a system in its entirety and then focusing on its component parts. Bottom-up approaches consist of analyzing the component parts of a system and building on this analysis to describe the system as a whole<sup>8</sup>.

#### **TOP-DOWN APPROACH**

Infrastructure interdependencies are complex and dynamic and continue to grow in number, resulting in systems that are increasingly vulnerable to cascading and escalating effects across infrastructure sectors. There are numerous approaches to identifying interdependencies, to manage these complexities, this Whitepaper uses a Top-Down approach, by first defining how the overall critical infrastructure system functions in general; current infrastructure functions in a particular geographical region context; the interdependencies between that sector and other critical infrastructure systems; and the potential consequences that could result from a disruption of services.

In the case of Palos Verdes Peninsula, this White Paper infrastructure interdependency analysis provides the following:

- 1. Overall critical infrastructure system functions in general.
- 2. the interdependencies between that sector and other critical infrastructure system.
- 3. and the potential consequences that could result from cascading failures.

This initial analysis serves as the basic building blocks for more advanced analyses incorporating these inputs in models and simulations.

#### INFRASTRUCTURE SECTORS SERVICING THE PALOS VERDES PENINSULA

Six critical infrastructure sectors servicing the Palos Verdes Peninsula are analyzed in this White Paper:

- $\Rightarrow$  Electricity (Energy Sector)
- $\Rightarrow$  Natural Gas (Energy Sector)
- $\Rightarrow$  Telecommunications Systems (Communication Sector)
- ⇒ Information Systems (Communication Sector)
- $\Rightarrow$  Water systems (Water Sector)
- $\Rightarrow$  Wastewater systems (Water and Wastewater Sector)

<sup>8.</sup> Public Technology Institute, 2011, "Local Government Energy Assurance Guidelines" <u>https://www.naseo.org/Data/Sites/1/documents/energyassurance/documents/pti\_local\_governement\_energy\_gu\_idelines.pdf</u>

### ELECTRICITY GENERAL OVERVIEW

The electricity Infrastructure sector includes the generation, transmission, and distribution of electricity. Electricity is universal, impacting all critical infrastructure systems<sup>9</sup>. Electricity is generated at power plant stations, transmitted across high voltage lines to substations and then delivered at lower voltages to end users through the distribution system.



### HOW ELECTRICITY GETS TO YOUR HOME

- 1. **Electricity Generation:** Electricity is made at a power plant station, large spinning turbines generate electricity, powered by wind, coal, natural gas, or water and deliver it to the transmission system.
- 2. **Transformers**: Once generated, the electrical current is then sent through transformers, which increase the voltage so the power can be pushed over long distances.
- 3. **Transmission Lines:** The electrical charge then goes through high-voltage transmission lines that stretch across the country.
- 4. **Substations**: At the other end of a transmission line, is a substation that uses transformers to lower the voltage, so the electricity can be distributed to customers at a usable voltage.
- 5. Distribution Lines: The electricity is then sent through distribution lines to neighborhoods. Smaller transformers reduce the voltage again to make the power safe to use in homes. These smaller transformers may be mounted on power poles or sitting on the ground (they're the big green boxes, called pad mount transformers).
  - The electricity then connects to consumers' homes, where it passes through a meter which measures the amount of electricity used.
  - Finally, electricity travels through wires inside the walls to the outlets and switches in consumers' homes.

Department of Energy and Department of Homeland Security, 2007, "Critical Infrastructure and Key Resources Sector-Specific Plan as input to the National Infrastructure Protection Plan (Redacted)", <u>https://energy.gov/sites/prod/files/oeprod/DocumentsandMedia/Energy\_SSP\_Public.pdf</u>

### ELECTRICITY BACKGROUND: PALOS VERDES PENINSULA

Southern California Edison (SCE) provides the supply of electrical power to municipal, commercial, and residential customers on the Palos Verdes Peninsula. SCE operates the Harbor Generating Station, a 474-megawatt natural gas facility located south of Wilmington which supplies a majority of electrical power to the Palos Verdes Peninsula. The electrical power distribution infrastructure for the Peninsula is designed as an integrated grid system, principally for ease of maintenance and uniform current flow.<sup>4</sup>

The Peninsula is currently served by transmission lines which parallel Hawthorne Blvd., Crest Rd. and Crenshaw Blvd. Substations located on the Palos Verdes Peninsula receive power from the transmission system and make electricity available at a usable voltage, which then gets distrusted to Peninsula Residents homes through a network of distribution lines, in some areas, both transmission and distribution lines are co-located on the same poles.



FIGURE 3: SCE TRANSMISSION LINES AND POWER SUBSTATIONS SERVICING THE PENINSULA, INFORMATION GATHERED FROM: SOUTHERN CALIFORNIA EDISON POWER SITE.

<sup>10</sup> U.S. Department of Homeland Security, 2018, "Infrastructure Interdependency Assessment Puerto Rico" https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7415906/

## FIGURE 4: SOUTHERN CALIFORNIA EDISON (SCE) NETWORK OF DISTRIBUTION LINES AND POWER SUBSTATIONS SERVICING THE PENINSULA, INFORMATION GATHERED FROM: <u>SOUTHERN CALIFORNIA EDISON POWER SITE.</u>



#### ELECTRICITY UPSTREAM DEPENDENCIES:

Electricity infrastructure depends heavily on other infrastructure sectors, such as natural gas for supplying fuels for power generation. Table 4 depicts critical infrastructure sectors that Electricity depends on to function properly.

#### TABLE 4: ELECTRICITY UPSTREAM DEPENDENCIES

			UPSTREAM DEPEND	ENCIES	
∠LI	Sector:	NATURAL GAS	WATER	COMMUNICATIONS	WASTEWATER
ELECTRI	Service/ Resources Provide	Fuel for power generation.	Temperature control (e.g., cooling of equipment), fire suppression, potable water.	Telecommunication for daily operations; and SCADA systems.	Wastewater removal service, raw water supply for hydroelectric generation.

#### ELECTRICITY DOWNSTREAM DEPENDENCIES:

The Electricity Subsector has downstream dependencies with all critical infrastructure sectors, making it a fundamental need and community-wide requirement. Water treatment facilities, pumping stations, and communication systems rely heavily on electricity supply. Electricity is particularly important for heating, control systems, lighting, mechanical and electrical equipment, and security and safety. Additionally, electricity is required for the operation of petroleum refineries and distribution terminals<sup>10</sup>.

<sup>10.</sup> U.S. Department of Homeland Security, 2018, "Infrastructure Interdependency Assessment Puerto Rico" <u>https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7415906/</u>

			DOWNSTREAM DEPEN	DENCIES	
È	Sector:	NATURAL GAS	WATER	COMMUNICATIONS	WASTEWATER
ELECTRIC	Service/ Resources Provide	Power needed for pumping stations, storage, control systems and facilities.	Power is needed to energize control system monitoring and controls at remote sites, including IT and Communications equipment.	Power needed for control facilities, communication towers, and remote monitoring capabilities.	Power needed for control systems, sewage pumping and treatment, and for facilities

#### TABLE 4: ELECTRICITY DOWNSTREAM DEPENDENCIES

#### POTENTIAL EFFECTS OF ENERGY DISRUPTIONS ON ESSENTIAL INFRASTRUCTURE:

Outside of the impacted region, the power system remains largely intact and functional. The impact of a disruption on local or regional infrastructure has a significant impact on the severity of a power outage and the restoration efforts required to return the system to normal operation. Table 5 illustrates the effects of electricity disruptions on critical services<sup>10</sup>.

TABLE	5: POTE	NTIAL EFFL	ECTS OF D	ISRUPTIONS

			POTENTIAL EFFECTS OF D	ISRUPTIONS	
	Sector:	NATURAL GAS	WATER	COMMUNICATIONS	WASTEWATER
ELECTRICITY	Service/ Resources Provide	Failure of fuel for power generators and lubricants for facilities. Loss of heating and cooking abilities.	Loss of Control systems, lift stations, and facilities: transportation of water (pumps); cooling and emission controls; water transport for emergency response	Failure of communication facilities and towers, Loss of electronic transactions and ability to obtain data. Customer service and repair crew communications failure.	Monitoring equipment affected, Restriction of sewage pumping and treatment for stationary, scale systems. Challenges in communicating with Residents and business Potential impact to facility lighting, telecommunications; electronic data.

# CONSIDERATIONS FOR ELECTRICITY INFRASTRUCTURE SERVICING THE PALOS VERDES PENINSULA:

At the present time, the Peninsulas electrical power needs are being reliably met by Southern California Edison (SCE). A potential problem of electricity reliability for the Peninsula is that facilities in the area are susceptible to damage from earth movements, such as earthquakes and landslides. Additionally, overhead transmission lines, transformers, and associated poles pose potential significant adverse safety hazards for the Peninsula. Overhead wires and associated hardware have caused brush fires and are vulnerable to damage caused by natural conditions (such as high winds, lightning, and tree growth) and human-caused conditions (such as automobile accidents), creating power outages and, in some cases, safety hazards if severed or broken.

The interdependencies of the Electrical infrastructure sector servicing the Palos Verdes Peninsula combined with impacts of natural disasters can lead to a ripple effect of disruptions of Critical Infrastructures serving the Palos Verdes Residents. The understanding of the Electricity infrastructure sector interdependencies and critical failure points is therefore vital to achieving long term resilience planning for the Palos Verdes Peninsula.

<sup>12</sup> Department of Energy and Department of Homeland Security, 2010, "Communications Sector-Specific Plan Annex of the National Infrastructure Protection Plan", <u>https://www.cisa.gov/sites/default/files/publications/nipp-ssp-communications-</u> 2010-508.pdf

### NATURAL GAS GENERAL OVERVIEW

Natural gas accounts for a significant percentage of the primary energy consumed in the United States. Natural gas consumption in the United States is highly seasonal, with the higher demand in winter for heating and lower demand in summer. The natural gas section of the critical infrastructure sectors includes the production, processing, transportation, distribution, and storage of natural gas; and gas control systems<sup>11</sup>.

**Natural Gas Production** – A majority of natural gas comes from natural gas production fields in New Mexico, west Texas, and Oklahoma, as well as in the Rocky Mountains and Canada. The remaining natural gas supply percentage is produced locally in Central and Southern California from onshore and offshore fields.

**Natural Gas Processing** – Natural gas processing consists of separating all of the various hydrocarbons and fluids from the pure natural gas to produce pipeline-quality dry natural gas.

**Natural Gas Transmission**- The interstate natural gas pipeline network transports natural gas from processing plants in producing regions to areas with high natural gas demands, particularly large urban areas. Compression stations along the pipeline transmission route keep the gas moving at the desired pressure.

**Natural Gas Storage** – Gas is typically stored underground and under pressure as an efficient way to balance discrepancies between supply input and market demand. Three types of facilities are used for underground gas storage: depleted reservoirs in oil and/or gas fields, aquifers, and salt caverns.

**Natural Gas Distribution** – Local distribution companies, typically transport natural gas from interstate pipeline delivery points to end-users through thousands of miles of distribution pipe. Delivery points for local distribution companies are often termed city gates, especially for large municipal areas, and are important market centers for the pricing of natural gas.



#### Natural gas production and delivery

Source: U.S. Energy Information Administration

11. State of Oregon, 2012, "Oregon State Energy Assurance Plan" <u>https://www.oregon.gov/energy/safety-resiliency/Pages/Energy-</u> Assurance- Plan.aspx#:~:text=The%20Oregon%20State%20Energy%20Assurance,resources%2C%20and%20identifies%20system %20interdependencies.

### NATURAL GAS BACKGROUND: PALOS VERDES PENINSULA

Southern California Gas Company (SoCalGas) provides natural gas to the Palos Verdes Peninsula through a network of transmission lines, high-pressure distribution supply lines and medium pressure distribution pipelines. Although part of the larger SoCalGas system, the Peninsula is also included in SoCalGas distribution sections, which function principally as sub-administrative districts and are responsible for all lines and service systems that feed from transmission lines to the point of delivery<sup>4</sup>.

The natural gas distribution system consists of resource facilities and networks. Resource facilities include natural gas processing and transmission facilities that are located outside the Peninsula area. Natural gas networks, on the other hand, consist of the physical infrastructure in place on the Peninsula that is used to deliver natural gas to residents; in many cases, the natural gas network parallels water and electric networks.<sup>10</sup>

#### FIGURE 5: NATURAL GAS TRANSMISSION AND HIGH-PRESSURE DISTRIBUTION LINES: INFORMATION GATHERED FROM SOCALGAS NATURAL GAS PIPELINE MAP



#### NATURAL GAS UPSTREAM DEPENDENCIES:

Significant Interdependencies exist between Natural Gas infrastructure and the Communications, Transportation, Water, and Wastewater Systems Sectors. Natural gas is used for generating electric power, while electric power is used for core operations in each fuels subsector (e.g., for pumping stations, storage, control systems). Table 6 depicts critical infrastructure sectors Natural Gas depends on to function properly<sup>9</sup>.

<sup>13</sup> Department of Energy and Department of Homeland Security, 2010, "Communications Sector-Specific Plan Annex of the National Infrastructure Protection Plan", <u>https://www.cisa.gov/sites/default/files/publications/nipp-ssp-communications-</u> 2010-508.pdf

#### TABLE 6: NATURAL GAS INFRASTRUCTURE UPSTREAM DEPENDENCIES

			UPSTREAM DEPEND	ENCIES	
GAS	Sector:	ELECTRICITY	WATER	COMMUNICATIONS	WASTEWATER
NATURAL	Service/ Resources Provide	Power needed for pumping stations, storage, control systems and facilities.	Temperature control (e.g., cooling of equipment), fire suppression, potable water.	Telecommunication for daily operations; and SCADA systems.	Wastewater removal service, raw water supply for hydroelectric generation.

#### NATURAL GAS DOWNSTREAM DEPENDENCIES:

Historically, natural gas was primarily used for heating. However, natural gas has been increasingly used to generate electricity since the late 1990s. Natural gas-fired generation was also increased by the advent of combined-cycle generation capacity additions. Additionally, The Natural Gas sector has downstream dependencies with all of the critical infrastructure sectors as, Natural Gas provides all sectors with heating, steam generation, and cooking abilities. Table 7 depicts critical infrastructure sectors Electricity depends on to function properly.

#### TABLE 7: NATURAL GAS INFRASTRUCTURE DOWNSTREAM DEPENDENCIES

			DOWNSTREAM DEPEN	DENCIES	
GAS	Sector:	ELECTRICITY	WATER	COMMUNICATIONS	WASTEWATER
NATURAL	Service/ Resources Provide	Natural Gas in needed for fuel for power generation.	Natural Gas is needed for heating, pumps and lift stations, and facilities.	Natural gas needed for fuel for generators and facilities.	Natural gas needed for fuel for generators and facilities.

# POTENTIAL EFFECTS OF NATURAL GAS DISRUPTIONS ON ESSENTIAL INFRASTRUCTURE:

A power outage can effectively halt the flow of fuel through pipelines. An interruption or pressure loss in natural gas pipeline systems may result in the loss of multiple natural gas-fired power generators, significantly reducing available power and jeopardizing the reliability of the energy sector. Although underground natural gas storage facilities can provide a backup for the natural gas supply to certain power sources, natural gas pipeline disruptions, would cause significant reductions in electric power services. Table 8 gives an example of Potential Effects of Natural Gas Disruptions on Essential Services<sup>10.</sup>

GAS		POTENTIAL EFFECTS OF DISRUPTIONS					
	Sector:	ELECTRICITY	WATER	COMMUNICATIONS	WASTEWATER		
NATURAL	Service/ Resources Provide	Significant impact to power generation. Impact on fuel for heating, generators and for facilities.	Impact on fuel for water treatment, heating, pumps and lift stations, and facilities.	Impact to facility lighting, telecommunications; electronic data. Impact on fuel for heating, generators and for facilities.	Restriction of sewage pumping and treatment for stationary, scale systems.		

#### TABLE 8: POTENTIAL EFFECTS OF DISRUPTIONS

### COMMUNICATIONS SYSTEMS GENERAL OVERVIEW

The Communications Sector provides products and services that enable the efficient operation of our global information-based society. The communications industry has evolved rapidly over the last decade to include mobile broadband, cloud computing, the Internet of Things, and software-defined networks. Convergence of voice and data networks has continued, and widespread adoption of mobile devices (e.g., smartphones and tablet computers) has created a massive demand for mobile broadband communications<sup>12</sup>.

Communication networks enable people from all over the world to communicate with one another, instantly access information, and communicate from remote locations. This entails establishing a connection between a sender (including voice signals) and one or more recipients through the use of technology (e.g., a telephone system or the Internet) in order to transfer data from one location to another. Communication networks comprise both physical infrastructure (structures, switches, towers, and antennas) and cyber infrastructure (routing and switching software, operational support systems, and user applications), posing significant interdependencies on all sectors of critical infrastructure<sup>12</sup>.

The Communications sector includes the following five component areas that have similar functions and operations<sup>12</sup>.

- Broadcasting Systems: Broadcasting systems are composed of free and subscription-based overthe-air radio and television (TV) stations that provide analog and digital audio, video, and data programming. Broadcasting systems operate on three different frequency bands: medium frequency (MF (AM radio)), very high frequency (VHF (FM radio and television)), and ultra-high frequency (UHF (TV).
- Cable: The cable industry is made up of over 7,700 cable systems that provide analog and digital video programming, digital telephone service, and high-speed broadband. The cable systems provide bidirectional signal paths to the customer via a combination of fiber and coaxial cable. This hybrid fiber/coaxial (HFC) network effectively benefits Business and residential customers because it improves signal performance, expands available bandwidth, and increases overall network reliability.
- Satellite: Satellites are launched into orbit to relay voice, video, or data signals as part of a telecommunications network. Earth station antennas transmit signals to the satellite, which are amplified and sent back to Earth for reception by other earth station antennas. Antennas on stationed on Earth transmit signals to the satellite, which are amplified and received via other ground stations antennas. Satellites perform a variety of functions through the use of a combination of terrestrial and space-based components, including bidirectional transmission of voice, video, and data services; data collection; event detection and timing; and navigation.
- Wireless: Wireless refers to telecommunication in which electromagnetic waves rather than wire carry a signal over a portion of or the entire communication path. Wireless technologies consist of cellular phones, wireless hot spots (WiFi), personal communication services, high-frequency radio and commercial and private radio services to provide communication services.
- Wireline: Comprises circuit- and packet-switched networks connected via copper, fiber, and coaxial cable. It consists of private enterprise data and telephony networks, the Internet's core backbone, and the public switched telephone network (PSTN).

<sup>12</sup> Department of Energy and Department of Homeland Security, 2010, "Communications Sector-Specific Plan Annex of the National Infrastructure Protection Plan", <u>https://www.cisa.gov/sites/default/files/publications/nipp-ssp-communications-</u> 2010-508.pdf

### COMMUNICATIONS SECTOR BACKGROUND: PALOS VERDES PENINSULA

Communication systems are critical for disseminating news and information, relaying personal and business messages, providing audio and visual entertainment, and transmitting and receiving emergency messages. The communication component of the Palos Verdes Peninsula infrastructure system is a multifaceted and highly complex system of resource facilities and networks that contribute to the economic and social well-being of the peninsula<sup>4</sup>.

**Telephone systems** in the Peninsula consists of a network of transceivers (telephones), transmission lines, and switching centers. The Peninsula is served by Frontier (formerly named Verizon) and AT&T for their landlines. However, individuals can contract their cell phones and laptops with any company of their choice and are not limited to Frontier and AT&T. Both Frontier and AT&T currently have the standard copper lines and the newer fiber-optic lines available to customers<sup>4</sup>.

**Cable Television,** on the Peninsula, cable television is supplied by Frontier, AT&T, and Cox Communications. All three companies use fiber-optic lines to provide instant access to numerous television channels, high-speed Internet, and digital telephone for their customers. There is also satellite TV provided by companies such as DirectTV and DishNetwork, who can provide similar access to television channels. The difference is that with satellite TV, a satellite dish will need to be installed.

**Broadcast Communications** are systems that have no wires or transmission lines, but rather transmit signals through the airwaves. Of the three primary broadcast systems, radio and television are by far the most popular, while microwave remains a more specialized communications medium. Radio and television communication systems are operated by privately owned companies that supply free audio and audio/visual communication to people with appropriate receivers. These broadcast systems are used primarily for the dissemination of news, information, and entertainment.

The County of Los Angeles currently owns and operates a microwave station near the intersection of Highridge Road and Crestridge Road in the City of Rancho Palos Verdes. The facility is a broadcast communication system designed to relay signals to and from the Palos Verdes Peninsula area. The prime users of the facility are the County Fire and Sheriff Departments and other County agencies<sup>4</sup>.

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#### COMMUNICATIONS SYSTEMS UPSTREAM DEPENDENCIES:

The Communications Sector's primary upstream dependency is on electricity, which is generated either commercially or on-site. Water can also be a limiting factor in the operation of buildings that require heating, ventilation, and air conditioning or cooling (e.g., data centers). Additional, upstream dependencies of the Communications System sector are depicted in Table 9.

#### TABLE 9: COMMUNICATIONS SYSTEMS UPSTREAM DEPENDENCIES

S			UPSTREAM DEPENDE	ENCIES	
ATION	Sector:	ELECTRICITY	WATER	NATURAL GAS	WASTEWATER
COMMUNIC	Service/ Resources Provide	Power needed for control facilities, communication towers, and remote monitoring capabilities.	Water is needed for Temperature control (e.g., cooling of equipment), fire suppression, potable water.	Telecommunication for daily operations; and SCADA systems.	Wastewater removal service, raw water supply for hydroelectric generation.

#### COMMUNICATIONS SYSTEMS DOWNSTREAM DEPENDENCIES:

Many other sectors of critical infrastructure are highly dependent on the Communications Sector, The Communications Sector is one of the few sectors that affects all other sectors. Each sector relies on communications services to support its operations and associated daily communication requirements for corporate and organizational networks and services (e.g., Internet connectivity, voice services, and video teleconferencing capabilities). Table 10 summarizes the extent to which other sectors rely on the Communications Sector.

#### TABLE 10: COMMUNICATIONS SYSTEMS UPSTREAM DEPENDENCIES

s			DOWNSTREAM DEPEN	DENCIES	
COMMUNICATION	Sector:	ELECTRICITY	WATER	NATURAL GAS	WASTEWATER
	Service/ Resources Provide	Telecommunication for daily operations; and SCADA systems	Telecommunication for daily operations; and SCADA systems	Telecommunication for daily operations; and SCADA systems	Telecommunication for daily operations; and SCADA systems

# POTENTIAL EFFECTS OF COMMUNICATION SYSTEMS DISRUPTIONS ON ESSENTIAL INFRASTRUCTURE

The Communications sector has downstream dependencies with all critical infrastructure sectors. All sectors rely on Communications, making its reliability a fundamental need and requirement. Communications is particularly important for Telecommunication for daily operations, and Supervisory control and data acquisition (SCADA) systems monitoring. Large regional impacts across all infrastructure sectors can occur when communication systems disrupted. Table 11 summarizes the potential effects of disruptions of the Communications Sector.

#### POTENTIAL EFFECTS OF DISRUPTIONS Sector: WATER WASTEWATER COMMUNICATIONS Service/ Failure of communication Loss of monitoring of pipeline Loss of monitoring of pipeline Monitoring equipment facilities and towers, Loss of status, loss of situational status, loss of situational affected, Restriction of sewage **Resources Provide** electronic transactions and awareness. awareness. pumping and treatment for ability to obtain data. Custome stationary, scale systems. service and repair crew Challenges in communicating communications failure. with Residents and business Potential impact to facility lighting, telecommunications; electronic data.

# CONSIDERATIONS FOR COMMUNICATION SYSTEMS INFRASTRUCTURE SERVICING THE PALOS VERDES PENINSULA:

California has seen an increasing number of large-scale disasters over the last two decades as a result of climate change. Our communications systems, which are normally extremely reliable and dependable, failed during recent disasters. These failures jeopardize situational awareness, impact alerts and warnings, obstruct critical communications between multiple stakeholders, and can result in unnecessary deaths and other social harms.

During a community wide crisis, efficient, rapid and accurate information flow can save lives, especially during complex, evolving events like a wildfire. Given the importance of communication to the public in an emergency, it is critical to continue to examine the extent to which the Communication Sector depends on and impacts essential critical infrastructure servicing the Palos Verdes Peninsula.

### WATER SYSTEMS GENERAL OVERVIEW

Water is drawn from a freshwater source, usually a lake, river, or stream, and treated before it is pumped to our homes and businesses. Water from reservoirs, streams, and rivers often contains a variety of organisms and dissolved chemicals or metals. This material must be removed from the water to ensure that it is safe for drinking or other uses. Most systems will include at least two to three filtration stages to remove harmful or dangerous particles such as bacteria, viruses and other debris.

After treatment, the system works by transferring quantities of water into the established water distribution systems. Water Distribution system infrastructure is generally considered to consist of the pipes, pumps, valves, storage tanks, reservoirs, meters, fittings, and other hydraulic appurtenances that connect treatment plants or well supplies to consumers' taps.<sup>13</sup>

Fundamentally, a water supply system consists of three basic components: the source of supply, the processing or treatment of the water, and the distribution of water to the users.

**Water Sources** – These include surface reservoirs, rivers, and ground water from aquifers via wells. Utilities often use a combination of multiple water sources to ensure an uninterrupted supply.

**Treatment** –Drinking water in a public water system is treated to make sure it is safe to drink before it enters all those pipes. Water treatment plants filter the water to remove particles of dirt, minerals, microorganisms and other contaminants. Chlorine is a chemical commonly used to disinfect water supplies.

**Distribution and Collection** – Public drinking water systems include a series of pipes, storage tanks, pumps, valves, and gates. Flow rates are adjusted to ensure that the required pressure is available where it is needed.



Source: Environmental Protection Agency: <u>https://www.epa.gov/dwsixyearreview/drinking-water-distribution-systems</u>

<sup>13.</sup> Department of Energy and Department of Homeland Security, 2010, "Water and Wastewater Sector-Specific Plan Annex of the National Infrastructure Protection Plan", <u>https://www.cisa.gov/sites/default/files/publications/nipp-ssp-water-2015-508.pdf</u>

### WATER BACKGROUND: PALOS VERDES PENINSULA

The Palos Verdes Peninsula's water needs are currently served by the California Water Service Company (Cal Water). Cal Water purchases surface water imported by the Metropolitan Water District of Southern California from the Colorado River and the State Water Project in Northern California, which is then used to serve the entire Peninsula, including the City, through the Palos Verdes water system.<sup>4</sup>

The Palos Verdes water system distributes water through two distinct water distribution systems. These systems are commonly referred to as the "D-500 System" and the "Ridge System." The D-500 System serves the lower-elevation areas of the Peninsula, about 13% of the total demand, and the Ridge System serves the upper-elevation areas, comprising the remaining 87% of demand. The average daily demand and maximum daily demand of the Ridge and D-500 Systems combined is 12,500 gallons per minute (gpm) and 20,600 gpm, respectively.

All of the supply to the Palos Verdes system is delivered through four connections located at the northeastern edge of the Peninsula<sup>4</sup>.

Recently, Cal Water has completed the Palos Verdes Peninsula Water Reliability Project, the project enhances the reliability of the drinking water infrastructure on the Palos Verdes Peninsula and will help ensure that all Peninsula residents continue to have safe, reliable water service. Prior to the project's completion, 90% of the Palos Verdes Peninsula was served by one 60-year-old drinking water pipeline and a single pump station.

The project replaced a portion of the existing water pipeline and added a second pipeline to deliver drinking water to homes and businesses. In total, crews installed about seven miles of a new pipeline. Additionally, the project added a second pump station on a separate electrical grid that will help guard against the risk of prolonged water service outages caused by disruptions such as natural disasters.



#### FIGURE 6: CALIFORNIA WATER SERVICE (CAL WATER) FACILITIES SERVICING THE PENINSULA

#### WATER UPSTREAM DEPENDENCIES:

The Water Sector is critical to all sectors, it is dependent on several key sectors. Upstream dependencies of the Water System sector are depicted in Table 12.

	UPSTREAM DEPENDENCIES				
WATER	Sector:	ELECTRICITY	COMMUNICATIONS	NATURAL GAS	WASTEWATER
	Service/ Resources Provide	Power needed for pumping stations, storage, control systems and facilities.	Telecommunication for daily operations; and SCADA systems	Natural Gas is needed for heating, pumps and lift stations, and facilities.	wastewater removal service, raw water supply for hydroelectric generation

#### TABLE 12: WATER UPSTREAM DEPENDENCIES

#### WATER DOWNSTREAM DEPENDENCIES:

The Water Sector is considered one of the most critical lifeline sectors because its functions are essential to core operations in nearly every other critical sector. When water services are lost for relatively short periods (less than eight hours), the functioning of multiple sectors is significantly degraded.

#### TABLE 13: WATER DOWNSTREAM DEPENDENCIES

WATER	DOWNSTREAM DEPENDENCIES				
	Sector:	ELECTRICITY	COMMUNICATIONS	NATURAL GAS	WASTEWATER
	Service/ Resources Provide	Temperature control (e.g., cooling of equipment), fire suppression, potable water	Water needed for cooling and facilities.	Water needed for production, cooling, emission reduction and facilities.	wastewater removal service, raw water supply for hydroelectric generation

#### POTENTIAL EFFECTS OF WATER DISRUPTIONS ON ESSENTIAL INFRASTRUCTURE:

When water services are lost, even for short periods, the consequences can be widespread and dramatic. When these services are lost for an extended period of time, the results can be catastrophic. potential impacts that a disruption in water service could cause include the following: Loss of water for cooling, resulting in impacts to electrical and telecommunications equipment; Lack of water for consumption, cooking, bathing, flushing, fire suppression, etc.; Loss of water for commercial irrigation, food supply, and production to meet consumer needs and a secreased public confidence in water supply<sup>13</sup>.

#### TABLE 14: POTENTIAL EFFECTS OF DISRUPTIONS POTENTIAL EFFECTS OF DISRUPTIONS

WATER	Sector:	ELECTRICITY	COMMUNICATIONS	NATURAL GAS	WASTEWATER
	Service/	Loss of water for cooling	Loss of water for cooling (disabling	Impact on Cooling and Emissions	Significant Impact on
	<b>Resources Provide</b>	(disabling electrical and	electrical and telecommunications	Reduction Lack of water for	wastewater treatment plants
		telecommunications equipment)	equipment) Lack of water for	consumption, flushing, fire	negatively affecting public health
		Lack of water for consumption,	consumption, flushing, fire	suppression, etc.	and the environment.
		flushing, fire suppression	suppression		

## WASTEWATER SYSTEMS GENERAL OVERVIEW

The collection and treatment of wastewater is vital to public health and clean water. Sewers collect sewage and wastewater from homes, businesses, and industries and deliver it to wastewater treatment facilities. Wastewater systems move raw wastewater from the producer to wastewater treatment plants via a collection system The treatment plants remove hazardous materials from the wastewater via Physical, chemical, and biological processes prior to discharging the treated water safely into approved locations, typically reservoirs, streams, rivers, the ocean, etc.

Fundamentally, the basic function of wastewater treatment is to speed up the natural processes by which water is purified. The treatment of wastewater consists of two basic stages. The **primary and secondary**, which are outlined here. In the **primary** stage, solids are allowed to settle and removed from **wastewater**. The **secondary** stage uses biological processes to further purify **wastewater**. Sometimes, these stages are combined into one operation.

There are two basic stages in the treatment of wastewater. In the primary stage, solids are allowed to settle and removed from wastewater. The secondary stage uses biological processes to further purify wastewater. In the first stage primary stage, solids are allowed to settle and be removed from wastewater. The secondary stage uses biological processes to purify wastewater further.



Source: Environmental Protection Agency: https://www.epa.gov/sites/production/files/2015-09/documents/primer.pdf

### WASTEWATER BACKGROUND: PALOS VERDES PENINSULA

The four Peninsula Cities are located in District #5; the South Bay Cities Sanitation District is serviced by the Los Angeles County Sanitation District, which owns and operates the wastewater collection system within the Peninsula Cities<sup>4</sup>.

The Los Angeles County Sanitation District operates ten water reclamation plants, which treat an estimated 510 million gallons per day. The Joint Water Pollution Control Plant is located in Carson, California. The Joint Water Pollution Control Plant is one of the largest wastewater treatment plants in the world and is the largest of the Districts' wastewater treatment plans. This facility provides both primary and secondary treatment for approximately 300 mgd of wastewater. This plant serves a population of approximately 3.5 million people throughout the County, including the Palos Verdes Peninsula. Prior to discharge, the treated wastewater is disinfected with hypochlorite and sent to the Pacific Ocean through a network of outfalls. These outfalls extend 2 miles off the Peninsula to a depth of 200 feet.

#### WASTEWATER UPSTREAM DEPENDENCIES:

Wastewater systems for the Palos Verdes Peninsula depend on a variety of external infrastructures to maintain normal operations. Electric power is one of the most important services necessary for maintaining pumping and treatment operations. Table presents some Upstream dependencies of the wastewater System sector are depicted in Table 15.

	UPSTREAM DEPENDENCIES				
ATER	Sector:	ELECTRICITY	WATER	NATURAL GAS	WASTEWATER
WASTEW	Service/ Resources Provide	Power needed for pumping stations, storage, control systems and facilities.	Essential and highly dependent infrastructure for health and safety	Natural Gas is needed for heating, pumps and lift stations, and facilities.	Telecommunication for daily operations; and SCADA systems

#### **TABLE 15: WASTEWATER UPSTREAM DEPENDENCIES**

#### WASTEWATER DOWNSTREAM DEPENDENCIES:

A wide range of physical infrastructure in industries and other critical infrastructure relies heavily on the proper functioning of wastewater systems. Table 16 demonstrates the interdependencies between wastewater infrastructure and other critical infrastructure.

	DOWNSTREAM DEPENDENCIES					
WASTEWATER	Sector:	ELECTRICITY	WATER	NATURAL GAS	COMMUNICATIONS	
	Service/ Resources Provide	Sewage wastewater services fo facilities.	Sewage wastewater services for facilities.	Sewage wastewater services for facilities.	Sewage wastewater services for facilities.	

#### **TABLE 16: WATER DOWNSTREAM DEPENDENCIES**

**NS** 

# POTENTIAL EFFECTS OF WASTEWATER DISRUPTIONS ON ESSENTIAL INFRASTRUCTURE

The deterioration and subsequent failure of the Wastewater sector impacts the health of community, the environment, and has significant consequences for the additional utility sectors. Table 17 demonstrates the interdependencies between wastewater infrastructure and other critical infrastructure.

	POTENTIAL EFFECTS OF DISRUPTIONS							
WASTEWATER	Sector:	ELECTRICITY	WATER	NATURAL GAS	COMMUNICATIONS			
	Service/ Resources Provide	Lack of wastewater services, posing public health and sanitation issues.	Lack of wastewater services, posing public health and sanitation issues.	Lack of wastewater services, posing public health and sanitatior issues.	Lack of wastewater services, posing public health and sanitation issues.			

#### TABLE 17: POTENTIAL EFFECTS OF DISRUPTIONS

# CONSIDERATIONS FOR WATER AND WASTEWATER INFRASTRUCTURE SERVICING THE PALOS VERDES PENINSULA:

Water system infrastructure is critical to a community's economic and social viability. Although these systems ensure the basic health and safety of residents, businesses, and industry, they are frequently taken for granted due to the high level of service and reliability provided by water and wastewater utilities. The critical nature of these systems is not appreciated until a water main breaks or another type of service interruption occurs.

The interdependence of the water sector serving the Palos Verdes Peninsula, combined with the impact of natural disasters, can result in a ripple effect of critical infrastructure disruptions serving Palos Verdes residents. Understanding the interdependence and critical failure points of the water infrastructure sector is therefore critical for achieving long-term resilience planning for the Palos Verdes Peninsula.

### CONCLUSION

It is important to recognize that infrastructure sectors interoperate together in myriad ways in a "systems of systems" that supports the quality of life, wellbeing, and overall security for residents of the Palos Verdes Peninsula. Understanding these independencies is crucial to ensure that the Peninsula Cites are prepared to continue critical services to residents in times of emergencies. As critical infrastructures become more complex, the probability increases that infrastructure failures will cascade and escalate in multipart ways. Additional research is needed to understand better the infrastructure sectors processes and interoperability with other infrastructures. The infrastructure sector analysis in this White Paper provides a high-level summary of interoperations that affect infrastructure servicing the Palos Verdes Peninsula. This White Paper serves as an initial framework for recognizing interdependencies in the analysis of critical infrastructures and is intended to provide emergency planners with a foundational understanding of infrastructure interdependencies and how they could inform future emergency operation protocols.

Critical infrastructure sectors can lead to the proliferation of cascading and escalating failures across all infrastructure sectors. It is essential to integrate the characterization of interdependencies into emergency planning methodologies. This White Paper on *Infrastructure Interdependencies* is intended to convey this central concept. Future emergency planning efforts will address the specific interdependencies threats to the Palos Verdes Peninsula.

The Palos Verdes Cities of Palos Verdes Estates, Rancho Palos Verdes, Rolling Hills and Rolling Hills Estates comprehend the importance of the analysis of infrastructure interdependencies vulnerabilities in the belief that this analysis is a key in addressing the catastrophic challenges of infrastructure failures during an emergency response.





Public Safety Committee Agenda Item No. 7-C Meeting Date: 5-13-21

### MEMORANDUM

TO: PUBLIC SAFETY COMMITTEE

FROM: CITY MANAGERS

DATE: MAY 13, 2021

SUBJECT: STRATEGY FOR PENINSULA WIDE EMERGENCY COORDINATION THROUGH OF A SHARED COORDINATOR

PREPARED BY: Elaine Jeng, City Manager

#### RECOMMENDATIONS

The Committee may wish to provide further guidance on staff's proposed strategy to have a shared coordinator lead the Peninsula wide effort on evacuation, utility vulnerabilities, and communication protocols.

#### **BACKGROUND AND DISCUSSION**

Since inception, the Peninsula Emergency Preparedness Committee has embarked on many aspects of emergency preparedness for the area, including activities relating to the COVID-19 pandemic. In the last twelve months, agenda items included brush mitigation reports, utility presentations, training, preparedness exercise, and vulnerability studies. Recently, the membership of the committee grew from three agencies to four agencies and was renamed Public Safety Committee to cast a wider net in areas of coordination. To build on the growth and the effectiveness of the Committee, a strategic plan is needed to guide the group in implementing holistic programs and coordinated preparedness measures.

At the February 11, 2021 Peninsula Emergency Preparedness Committee meeting, the Committee was informed that staff would return with information on a strategic plan and report on the concept of an emergency coordinator serving all four Peninsula cities.

In 2018, the four Peninsula cities explored the idea of sharing an emergency coordinator. At the time, the City of Rancho Palos Verdes had an emergency coordinator on staff. The coordinator worked part-time. Absent of an emergency coordinator at Rolling Hills and Rolling Hills Estates, staff discussed that RPV's coordinator could serve the other two cities to meet their needs for emergency preparedness activities and become a full time position. A memorandum of understanding (MOU) was drafted along with a funding table. Prior to the finalization of the MOU, the coordinator retired and RHE hired an emergency coordinator.

In 2019, RPV hired a full time emergency coordinator, Jesse Villalpondo. Mr. Villalpondo led the recent tabletop emergency exercise for city staff of all four cities and First Responders. Mr. Villalpondo also drafted a white paper studying the interdependence of utility companies serving the Peninsula. Mr. Villalpondo has become the de facto Peninsula Emergency Coordinator.

Revisiting the concept of a shared emergency coordinator, RHE expressed that they no longer needed assistance in RHE specific tasks such as preparing a Hazard Mitigation Plan and or updating their Emergency Operations Plan. Instead, as discussed among the four cities, the vision for the shared emergency coordinator is for area wide coordination, not specific agency work.

In practice, the Peninsula cities have been collaborating on many fronts: Southbay Alerts, Disaster Area G, and the Southbay Council of Governments. More specific to the four cities, the Peninsula worked together to finalize a MOU to cost share School Resource Officers and to send many comments letters on proposed legislations. The Peninsula Cities also pulled meetings to discuss service issues with providers and approached the office of the Los Angeles County Board of Supervisor District 4, to plea for assistance for businesses and restaurants adversely impacted by COVID-19 restrictions. In each of the collaboration, the cities rotated in taking the leadership role on behalf of the group without the need to memorialize the practice and assign cost. In keeping with this practice, staff recommends that the Committee formally recognize Mr. Villalpondo as the Peninsula's Emergency Coordinator.

At the February 11, 2021 Committee meeting, there were members of the public that asked about the intent of the utility interdependency white paper once it is finalized. Another member of the public asked about equine evacuation. In previous meetings, Committee members have asked for reports from individual cities on emergency exercises and suggested a Peninsula traffic study to review readiness of evacuation routes. As evidence by the interest, there are many facets to emergency preparedness. With the establishment of the Committee, and a shared Peninsula Emergency Coordinator, a strategic work plan is needed to guide the Committee's work in tackling the many facets of emergency preparedness.

Using the inventory of recent discussions with the Committee, staff recommends that the Committee focus on the following three areas of emergency preparedness of immediate nature, for the next six to twelve months and consider the goals for each of these three areas:

- Study Peninsula evacuation routes
  - First Responder's input on routes
  - o Identify exit points and measures to improve these locations for readiness
  - Establish communication contact to respective cities for traffic control
  - Protocols for evacuating large animals
  - Identify temporary shelter locations
- Understand utility vulnerabilities and implement readiness measures
  - o Understanding utilities' contingency plans for continuous service
  - Utilities' recommended measure for individual contingency plan
- Communication protocols among Peninsula cities
  - Incident command to respective cities EOC to community
  - Outlets to receive emergency notifications
  - Neighborhood watch organizations

Staff also recommends that the Committee establish additional focus areas with a lesser immediate nature, for the twelve months following to build on the work.

- Home hardening campaign
- Vegetation/fire fuel management (roadside, private property, canyons and public spaces)
- Hazardous plants education campaign
- Utility undergrounding
- Joint emergency plans (e.g., Hazard Mitigation Plan)
- Joint grant applications to implement emergency preparedness measures

#### CONCLUSION

The close collaboration of the Peninsula cities can be leveraged with a strategic plan to help the communities be more prepared for disasters and emergencies.