City of Del Mar
Staff Report

TO: Honorable Mayor and City Council Members

FROM: Mohsen Maali, Deputy Public Works Director
Kristen M. Crane, Assistant City Manager
Via Scott W. Huth, City Manager

DATE: August 5, 2019

SUBJECT: Undergrounding Project Policy Recommendations and Next Steps for Project Implementation

REQUESTED ACTION/RECOMMENDATION:
Staff and the Undergrounding Project Advisory Committee (UPAC) recommend that the City Council approve the recommendations made by the UPAC and staff and provide direction on the following items:

1. Reaffirm the City's commitment to citywide undergrounding of all utility poles;

2. Confirm the recommended preliminary undergrounding boundary map (i.e., blocks), prioritization guidelines, and ranking of the blocks (Attachment A);

3. Authorize simultaneous design of the two identified areas in coordination with SDG&E and the necessary funding for initial implementation; and

4. Approve various policy recommendations made by UPAC, as identified in Attachment B, which are key assumptions for the Project Delivery Plan and estimated total UP budget.

DISCUSSION/ANALYSIS:

Background
Undergrounding all utility poles citywide often referred to as the Undergrounding Project (UP) is an identified City Council priority. In spring 2018, the City Council established the UPAC which has worked diligently for over a year to address numerous policy questions related to UP, assist with developing a scope of work and the selection process for a utility undergrounding consultant, developed a communications plan, explored several project financing scenarios, and developed prioritization guidelines and a recommended approach for moving forward.

The last update on the UP to the City Council was on April 15, 2019. At that time, the City Council authorized the City to initiate working with SDG&E on a Rule 20A project

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City Council Action:

along Camino del Mar between Seaview Avenue and Luzon Avenue. Efforts to initiate that project are underway.

The City Council also received several policy-related recommendations from the UPAC which were not acted upon due to outstanding questions surrounding the prioritization process and the total cost estimate for the UP. At that time, the City Council directed the UPAC and staff to further study the submitted cost estimates by the consultants and how the geographic areas were prioritized based on exposure to fire risk.

The purpose of this staff report is to report back on those two topics and to recommend a strategy for moving forward with the UP.

In-Depth Review of Undergrounding Program Cost Estimates

A key concern identified at the April 15, 2019, Council meeting was the wide difference between the cost estimates prepared by the City's consultants, Utility Specialists in 2016 and Lee & Ro, Inc. (Lee &Ro) in 2019. The 2016 cost estimate was $26 million, while the 2019 cost estimate was $51.6 million.

The City Council instructed the UPAC and staff to complete a deeper review of the costs, possibly hiring a third party for peer review, to compare the cost estimates and provide an explanation for the variances.

During the past three months, the UPAC formed a subcommittee, which completed an in-depth review with Lee & Ro of their cost estimate to understand what was included and then developed a standard cost breakdown template, which Lee & Ro and Utility Specialists were asked to submit based on their Rough Order of Magnitude (ROM) estimates.

Through this review, it was determined that there were several factors driving the wide range in cost estimates, including different assumptions about:

- Scope of the UP (e.g., inclusion of soft costs for work on private property, non-joint trenching for telecommunications, etc.);
- Inclusion of cost for contingency and construction cost escalation over time; and
- Value for the UP soft costs, such as project management, communications, and other necessary services which are expected to be required as part of bringing UP to fruition.

In an effort to present a conservative, complete portrayal of the entire anticipated UP cost, Lee & Ro's original $51.6 million cost estimate presented a comprehensive estimate covering all potential cost elements e.g., captured the estimated soft cost for work on private property and assumed the City bearing the cost for non-joint trenching (for the telecommunication utilities).

Based on their in-depth review, the UPAC has a better comfort level with each of the respective cost estimates and believes the core costs of the UP to be in the range of $32-$42 million. Generally, this is a fully loaded cost estimate for SDG&E to design, for construction, and for the minimum associated soft costs to bring the complete UP to fruition, except for any financing costs if applicable. The UPAC and staff have concluded that it is not necessary to hire another consultant to complete a third-party peer review.

UPAC's $32-42 million cost range excludes non-joint trenching for the telecommunications utilities, all poles on private property (e.g., Fairgrounds), the lagoon area (to be funded by SDG&E), and along Via de la Valle (eligible for 20A funding) and the associated project management, communications, and annual escalation for these areas. Furthermore, the range is based on lowered project management and contingency estimates for UP. Accordingly, this ROM estimate is based on several assumptions and therefore, subject to change when those assumptions change.

At approximately 69,000 linear feet of undergrounding for the entire citywide UP, $42 million equates to $609 per linear foot compared to the stated range from SDG&E of $700-1,000 per linear foot. Based on this dynamic, staff agrees the best way for the City to accurately assess both the full project and construction costs is by designing a "pilot project" and then seeking quote for construction from SDG&E and/or third-party contractors. When a construction bid is received, that will provide the best indication of the construction market trend in Del Mar and the cost for the necessary work. At that time, the City can re-visit the long-range funding plan and schedule with high confidence. Costs to proceed with the recommended approach are described in detail below.

Prioritization of Geographic Areas Based on Exposure to Fire Risk

The draft Project Delivery Plan presented to the City Council on April 15, 2019, identified the City divided into seven blocks, with a prioritized ranking system using a combination of density and a percentage associated with those areas that were in the Cal Fire Hazard Severity Zones Maps. See Attachment B. On April 15, the Council asked staff and the UPAC to revisit the prioritization for the Fire Hazard Severity Zones Maps based on public comment. It is important to note that the Cal Fire map is not intended to be used in the manner that it is with regards to power lines. Attachment C explains how the Cal Fire map was determined.

Throughout the UP planning process, the topic of whether and/or how potential exposure to fire risk, particularly in proximity to Crest Canyon, should be addressed in terms of prioritization of undergrounding the utility poles. In discussing this topic with SDG&E, they indicated that their poles are safe and there is not an inherent fire risk associated with their infrastructure in an urban environment, such as Del Mar. According to SDG&E, they have a robust fire prevention program (Attachment D), which includes pole removal in the areas of greatest concern; they do not identify any poles in Del Mar as a fire risk, nor do they have any undergrounding plans for their system in Del Mar because of exposure to fire risk.

In discussing the issue of undergrounding utilities poles and potential fire prevention efforts, Del Mar Fire Chief Mike Stein indicated that considering the terrain, topography, and fuel load within Del Mar, his recommended high priority poles are those on the lower side of Crest Canyon, off San Dieguito Drive/Oribia, and above Crest Canyon along the canyon ridge, including Crest Drive and Avenida Primavera. If a power line were to fall in these areas, there are unique conditions for fire exposure not realized elsewhere in the City. This includes areas of the preserve in which there are limitations to normal fuel management efforts due to environmental protections and topography). Other factors for this area are access from a firefighting perspective, west-blowing Santa Ana winds, and tendency for fire to burn faster as it burns up-slope. See attached letter from Chief Stein (Attachment E).

Based on this feedback, a new Block was drawn to cover the area described above, which is labeled as X1A, separate from the other Blocks. See Attachment A for map. The UPAC and staff recommend this area to be the City's top undergrounding priority.

However, this area is not being recommended as a "pilot project" because it is anticipated that the design work for this area may take longer than normal because of the environmental issues, difficult access, and coordination work with several private properties as several poles are on private property and will be undergrounded on private property which will require easements. Therefore, Block X1A is likely to be more expensive for construction. The remaining areas of the City within the Cal Fire map fall within Blocks 3 and 4 have an active fuel management program where most of the poles are in the public Right-of-Way (RoW).

It is important to note that the most significant contributor to fire risk is brush fuel load, not the utility poles. Even if the overhead wires and poles are removed, the area will remain within Cal Fire map. Defensible space and brush management strategies are critically important in this area.

Feedback from SDG&E

Since the April 15, City Council discussion, staff have engaged in more in-depth discussions with SDG&E about the City's intention to pursue the UP. Although these discussions with SDG&E began more than a year ago, new information was presented in the more recent meetings that affects how the UP will need to proceed, at least for the time being.

The most significant new information is that SDG&E has now determined that they cannot allow the City to use "Applicant Design" approach to design the underground systems. Applicant Design would have allowed the City to select an SDG&E-approved consultant to design the system. While this is contrary to the advice originally provided, having clarity on this now is useful for shaping how the UP moves forward.

The discussions with SDG&E have been positive, with a collaborative focus to look at the most expeditious and cost-effective way to implement the UP. Examples of topics being discussed with SDG&E include SDG&E's design capacity, the possibility of SDG&E also

providing estimates for completing trenching construction (which we could compare with the bids that the City would get for the same work), and their engagement in refining the layouts of the Blocks to maximize eligibility for Rule 20B credits. Rule 20B credits are assumed as part of the UP budget and equate to approximately 20% of the construction cost used as a credit for pole removal.

Recommended Approach to Proceed

Based on the information presented above and the previous City Council discussion, staff and the UPAC recommend proceeding as follows:

- Start now with design of two areas:
  - Area 1A as a pilot project. (benefits of pilot project discussed below)
  - Block X1A (fire risk exposure)

  Area 1A includes approximately 6096 linear feet of overhead wires and 55 poles; Area Block X1A includes approximately 10251 linear feet of overhead wires and 69 poles.

  In both cases, the current recommendation is to proceed with the design only. There is no commitment to proceed beyond design until after the designs are complete and the construction bids (SDG&E's construction design estimate and Open Bids if city choses to perform the civil work for individual 20B projects, also known as municipal trench) for the respective designs can be evaluated, which is expected to be in 12-18 months, upon establishment of a council-approved undergrounding district; otherwise, SDG&E designs cannot begin. See Attachment F.

  If needed, both areas may be scaled into smaller projects (i.e., subsets or clusters of poles) for the purpose of design, construction or both in a phased approach based on available cash flow and SDG&E design resource availability.

- Update the draft Project Delivery Plan to reflect the agreed upon approach to move forward, including the layout of the Blocks and the policy recommendations which have shaped the Project Delivery Plan. The Project Delivery Plan will be an important roadmap moving forward since it documents the agreed upon approach comprehensively.

- Work with SDG&E to confirm the final configuration of each of the areas identified above based on circuitry and other operational requirements for refined estimated cost and to advance to the required next step of establishing the districts. Establishment of the official districts will require a three-step public hearing and City Council approval per Del Mar Municipal Code.

Key Points and Policy Recommendation Assumptions of Project Delivery Plan

The UPAC has made a series of policy recommendations which have become key assumptions for the Project Delivery Plan and total estimated UP budget. These

recommendations were reviewed with the City Council at the meeting on April 15. The fundamental recommendation is for the City to embark on a long-term program to underground all overhead utility lines citywide. A discussion of each is provided in Attachment B with a summary as follows:

1) Prioritize neighborhoods or blocks for undergrounding according to the agreed upon guidelines developed by the UPAC, including Fire Critical and Non-Fire Critical Regions. Lee & Ro (Consultant) proposed a layout for the undergrounding blocks based on location, circuitry, and efficiency, which was closely reviewed according to the criteria by the City and the UPAC (currently under review by SDG&E).

2) Begin the overall UP with identified fire hazard risk exposure area X1A and by selecting Block 1A as the first project to test the concept, including logistics, costs, and community coordination and impact.

3) Develop a subsequent rollout plan based on results of the first (pilot) area selected.

4) The City will be responsible for and cover the cost of all undergrounding work within the City's RoW when performed as part of the UP except for non-joint trenching for telecommunications companies. Measure Q monies are not a legal option to pay for service laterals. This simplifies management of construction significantly, resulting in administrative cost savings and faster process.

5) Private property owners will be responsible for all work on their private property and the cost of the private lateral on their property, including the trench construction from their service panel to the service connection point (generally adjacent to the street). If applicable, private property owners would also be responsible for the cost to upgrade service panels to meet current building codes. This includes both financial responsibility and coordination responsibility for completing the necessary work.

6) Compensation for earlier conversion projects by private neighborhoods is not recommended due to legal and practical reasons.

Staff is seeking City Council's approval of the recommended prioritization process, general boundaries/layout (subject to minor adjustments by SDG&E based on operational needs, circuitry and to maximize Rule 20B credits) and ranking of the undergrounding Blocks (subject to future adjustments by the City Council).

Intended Lessons from the Pilot Project

The UPAC has extensively discussed the concept of a pilot project as the first phase for moving forward and the many ways in which it would be beneficial. Examples include opportunities to:

1) Provide unit cost validation information and test all other cost assumptions developed to date as part of developing the Project Delivery Plan. Once the design is complete, following the public contracting laws and the City's purchasing procedures, there will be a public bid process for construction. It is anticipated SDG&E would also provide a cost if they were to perform the trenching construction. Through the bid process, various construction companies will submit a bid to complete the necessary work. These bids as well as SDG&E's costs proposal will allow the City to evaluate the actual market costs for undergrounding work.

2) Develop and test the enhanced communication plan working with a smaller quantity of private property owners. The goal is to provide a high level of customer service and assistance during the process to familiarize the property owners with the process, timing, and necessary resources for completing work on their private property; and

3) Test assumptions used to develop the overall UP cost and schedule.

Outcomes from Pilot Project

If the City proceeds with a pilot project, it is important to consider what the potential outcomes and next steps would be:

- If the cost outcome from the bid process is within the anticipated range, the next steps will be to move forward with construction for that area (anticipated to take approximately 18 months) and initiate the design for the next prioritized area (anticipated to take 12-18 months), also taking into consideration Measure Q cash flow and available funding.

- If the cost outcome from the bid process is above the anticipated range, the City Council will be able to consider several alternatives:

    - Proceed with construction for the entire area understanding how that will affect the overall cost but, maintaining the commitment to citywide undergrounding.

    - Proceed with constructing a smaller portion of the pilot area and plan to fund the remaining portion as part of a future phase, still maintaining the commitment to citywide undergrounding.

    - Explore ways to share cost with private properties for work in RoW. There are multiple options to explore.

One concern is that by going forward with the pilot program, will the City be providing the properties in the pilot area with a benefit that may not be realized in the future by other property owners if the costs come in too high and the City needs to revise its financial commitment to the program? Staff believes that under most, if not all, potential outcomes

associated with moving forward with the UP based on higher costs, at a minimum, staff would recommend the City pay for and manage the design portion of future citywide undergrounding.

As the City embarks upon design for a pilot project, it is important to note that there would be extensive dialogue with all affected property owners in the pilot area and work completed on their behalf on their service laterals in preparation for the RoW construction effort. There would be enough time for private property owners to wait to complete their share of the conversion work until there is more clarity on next steps moving forward.

Additionally, SDG&E had informed staff that their designs typically have a shelf life of approximately one year because of changes in technical standards and field conditions (see attached letter). Generally, plans can be amended to make changes without starting from the beginning. To the extent that field conditions and standards don't change the design plans would be good until such changes occur and then at that time amendments would be needed. This is the same circumstances that we work under for our utility projects. It is a good consideration for planning project phasing and timing to avoid design completion too long in advance of when the funds are available for construction. Otherwise, there may be engineering costs (and time) to refresh the design.

Project Timing

The design process for the first phase is expected to take approximately 12-18 months. Once the design process is complete, as contemplated by the pilot project concept, the design will go through the public construction bidding process to determine the cost for construction, which will take approximately three months. SDG&E will also provide a bid for them to complete the trenching work. The bid process includes compilation of the bid package, the advertising period, receipt of bids, review of the bids, returning to the City Council to reaffirm the course of action or to discuss alternatives, and if directed, proceeding with the award of a contract for construction.

With that timeline, it is anticipated that construction could begin for the first phase area within approximately 21 months, though this timeframe may be several months longer for Block X1A, due to anticipated necessary environmental permitting and difficult site access.

Financial Considerations for Phase One

The UPAC discussed many scenarios related to UP financing at length. The UPAC recommends that private property owners should be responsible for all work on their private property and undergrounding of service laterals. This includes both financial responsibility and coordination responsibility for completing the necessary work. In turn, the City would be responsible for all work in the RoW since Measure Q monies are not a legal option to pay for service laterals.

Whereas there are differing opinions between the Finance Committee and the UPAC on the concept of "pay as you go" (PAYGO) versus funding the UP with long-term financing to complete it faster, the unified consensus is that it makes sense to proceed now with a

pilot project and to then evaluate in 12-18 months once there is more actual data for some of the variables and there is more accurate construction cost information through the bid process for the phase one areas. At that time, there will be more clarity on some of the assumptions (e.g., annual Measure Q revenue and estimated total UP cost). Therefore, a recommendation on the long-term financing plan is not sought at this time, rather just financial authorization to proceed with the design for the phase one areas (e.g., 1A and X1A) and the enhanced communications plan implementation.

The UPAC and SDG&E also made an alternative recommendation that if the City Council felt that the pilot area was too big or costly, it could be subdivided into smaller projects within the pilot area. However, staff believes that there would be enough resources to undertake Area 1A without reducing its size.

Cost to Proceed with Recommended Approach

SDG&E has informed the City that the option of Applicant Design is not available under Rule 20B. They have also informed the City that they will not require an engineering design fee/deposit until the design is complete (assuming that the City is committed to proceed with the work by issuing City Council Resolutions to that effect) which is anticipated to take approximately 12-18 months per project area. If the City opts to not proceed with construction, SDG&E will expect that the City will pay the for the engineering design costs.

Until the pilot project is designed and bid, the full cost to move forward with the recommended approach is very difficult to determine with high certainty. Considering the wide range of cost opinions among consultants and the UPAC, staff recommends that the City Council approve the estimated "fixed Costs" (Table 1) which covers project management, legal, technical consultant to review SDG&E designs and communication/public outreach efforts and the estimated design costs shown in Table 2 under the column "20/21.UPAC's recommended Blocks are estimated as follows:

Table 1 (Fixed Costs)

Work	20/21	21/22	22/23	23/24	24/25	TOTAL
Project Management, Legal, & Communication	$360,000	$320,000	$325,000	$325,000	$325,000	$2,095,000

Table 2 (Site Specific Costs)

Block	20/21	21/22	22/23	23/24	24/25	TOTAL
X1A	$935,961	$1,247,948	$1,247,948	$1,507,937	$1,299,946	$6,239,739
1A	$556,591	$742,122	$742,122	$896,730	$773,043	$3,710,609
1A + X1A	$1,492,552	$1,990,070	$1,990,070	$2,404,667	$2,072,989	$9,950,348

Construction is assumed to begin in FY 2020-2021 following the design completion and that is also when payments to SDG&E become due. The Project Team recommends

using PAYGO for now to fund these costs as sufficient cash is available as shown below under Fiscal Impact section.

Communications Plan

Recognizing that if the City Council takes action to proceed as recommended, there will be a lot of questions from the community and demand for information, both from the community at-large and the areas recommended for phase one. A communications plan has been developed by the Project Team that identifies the target audiences, planned messages, and communications tools to share detailed information on the overall envisioned process for moving forward and specific details for moving forward with the phase one areas. Staff anticipates returning to the City Council multiple times to discuss this plan in more detail and next steps for implementation.

Next Steps

If the City Council approves the recommended approach identified in this report, next steps to move forward will be as follows:

- Revise the draft Project Delivery Plan to reflect the selected approach to proceed. This document will serve as a road map for the future.

- Coordinate with SDG&E to finalize the layout and UP boundaries for the areas selected for phase one.

- Establish each of the two areas recommended for phase one (e.g., Area 1A and Block X1A) as undergrounding districts as required by the Del Mar Municipal Code through a public hearing and adoption of a resolution.

- Implement the communications plan and community outreach for the community at-large and property owners/residents in the priority project areas.

- Work with UPAC to review the scope of work for the next phase of the UP and to evaluate options for program management and consulting services.

- Perform a cost/benefit analysis for the long-term management of the UP i.e., using in-house staff, consultants or both.

While design is underway, staff recommends that the UPAC continue working on a number of items associated with moving the UP forward, such as:

- Evaluating Measure Q cash-flow available for construction and how that might drive phasing.

- Exploring a possible contractor pre-qualification process to assist private property owners in identifying a contractor for the lateral work on their property.

- Studying mechanisms to provide financial assistance to private property owners who need it for work on their property (not using funds from the City).

- Evaluating options for structuring the undergrounding program in order to leverage Measure Q funds if costs come in higher than anticipated and/or there is interest in moving the UP forward more quickly, while still working toward the overall end goal of undergrounding all utility poles.

Conflict of Interest Recusal

The California Fair Political Practices Commission has established requirements for determining conflict of interest. Due to the geographic boundaries of the proposed undergrounding Blocks in relationship to Councilmember-owned properties, the City Attorney has opined that the City should proceed assuming that all Councilmembers are conflicted as to certain aspects of the UP (i.e., prioritization and designation of Blocks). Therefore, all Councilmembers need to recuse themselves from voting on those matters based on the nature of the said issues.

Furthermore, the City Council will need to randomly select three names in open session for today's vote and all such votes going forward as required by law which practically means that a decision on topics like prioritization must be unanimous. The same subset of Councilmembers should make all future decisions regarding prioritizing and designating Blocks for undergrounding. Once designated, all councilmembers who are not in or within 500 feet of a Block can participate in follow up actions so long as those actions do not involve reordering the Blocks. This also means that the actions will often need to be split so that individual Councilmembers can recuse themselves from certain discussions and decisions as recommended by the City Attorney.

FISCAL IMPACT:

The Fiscal Years 2019-20 and 2020-21 Adopted Budget has allocated $1,376,320 and $6,629,200, respectively, for the Undergrounding Project. The recommendation to proceed with phase one (Block X1a and 1A) requires the two year budget for Undergrounding to be adjusted to $440,000 in FY 2019-20 and $1,852,552 in FY 2020-21. This action will amend the Fiscal Years 2019-20 and FY 2020-21 Operating and Capital Budget as follows:

DESCRIPTION	FUND	ACCOUNT #	AMOUNT
FY 2019-20			
Undergrounding Project	Measure Q	02-7000-7001	($936,320)
FY 2020-21			
Undergrounding Project	Measure Q	02-7000-7001	($4,776,640)
		Total Budget Decrease	**($5,712,960)**

The only financial commitment currently is for design and associated program management, communications, and technical consulting assistance during this phase.

The design cost will not be paid to SDG&E until the design is complete in FY 2020-21. However, it is important to note that the City will be expected to pay SDG&E for the design regardless of how the City decides to move forward in the future.

Measure Q generates approximately $2.8 million per year. Blocks X1A and 1A based on UPAC's undergrounding costs projection is estimated to be just under $10 million. If it takes 5 years to complete these two Blocks, the estimated amount is well within the $14 million the City anticipates receiving in Measure Q funds.

The following table reflects a cash flow for Measure Q funds based on the recommended appropriation for UP and the proposed changes associated with the Streetscape Segment 1 Project.

Measure Q Fund	**EXP BUDGET**	
Estimated Fund Balance 6/30/2019		**($580,903)**
Estimated FY 2019-20 Revenues		$2,853,180
Streetscape	$1,168,000	
Shores Park	$293,410	
Undergrounding	$440,000	
Estimated FY 2019-20 Expenditures		($1,901,410)
Estimated Fund Balance 6/30/2020		**$370,867**
Estimated FY 2020-21 Revenues		$2,935,350
Shores Park	$358,960	
Undergrounding	$1,852,560	
Estimated FY 2020-21 Expenditures		$2,211,520
Estimated Fund Balance 6/30/2021		**$1,094,704**

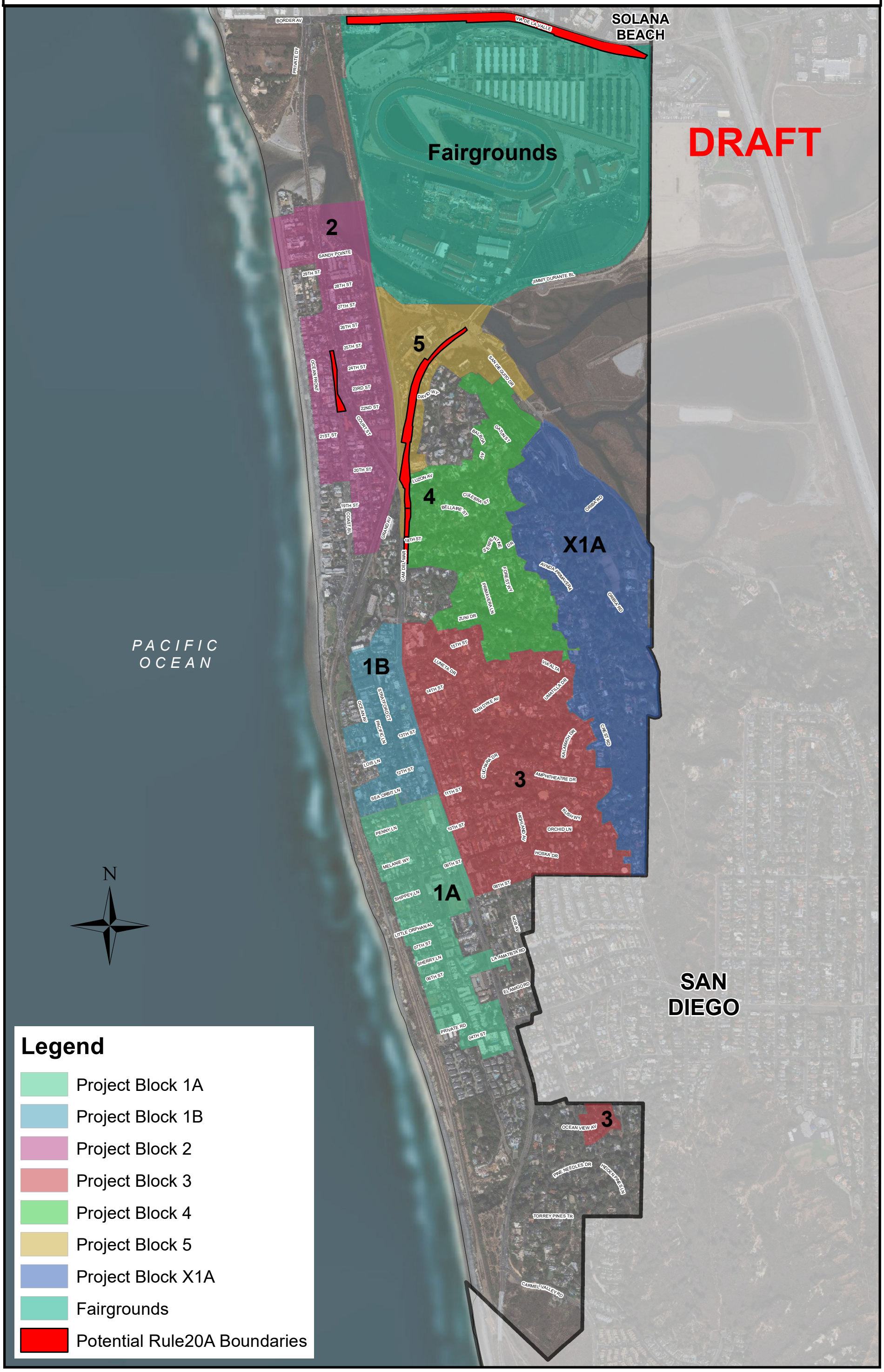
NEXUS TO CITY COUNCIL GOALS AND PRIORITIES:
The UP is a City Council high priority project.

ENVIRONMENTAL IMPACT:
This item does not constitute a "project" under the California Environmental Quality Act, per the CEQA guideline definition.

PRIOR CITY COUNCIL REVIEW:
The City Council has discussed the UP several times, including most recently on April 15, 2019.

ATTACHMENTS:
Attachment A - Citywide Undergrounding Map (with Priority Rankings)
Attachment B – UPAC Key Policy Recommendations/Assumptions for Project Delivery Plan
Attachment C – Explanation of Cal Fire Map
Attachment D – SDG&E Wildfire Safety Information Sheet
Attachment E - Fire Chief Letter of Opinion (Dated 06/11/19)
Attachment F – SDG&E Letter 07/29/19

Potential Project Blocks - Layout X1A



Legend

- Project Block 1A
- Project Block 1B
- Project Block 2
- Project Block 3
- Project Block 4
- Project Block 5
- Project Block X1A
- Fairgrounds
- Potential Rule20A Boundaries

Undergrounding Project Advisory Committee

Key Points and Policy Recommendation Assumptions of Project Delivery Plan

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Following is a list of recommendations initially developed by the Undergrounding Project Advisory Committee (UPAC), which are key underlying assumptions for the recommended Project Delivery Plan and estimated project budget. These recommendations were reviewed and refined by the City Council at their meeting on April 15, 2019.

- The City should remain committed to prioritizing and eventually undergrounding all overhead utilities.
- The City should cover all costs in the public right-of-way and on City property, with the exception of the cost for non-joint trenching for the telecommunications utilities' infrastructure.
- Private property owners and other government agencies should cover all the costs associated with the undergrounding project that is on their property.
- The City should limit expenditures on the UP to using Measure Q money and do the best the City can with those funds, even if it means the City cannot underground its entire jurisdiction as fast as the citizens wish, consistent with commitments to Shores Park and the Downtown Streetscape projects.

Grouping Criteria

- The guiding principles for developing the project area groupings, such as size, selection, defining projects, and prioritizing projects should be:
    - Use location, circuitry, and efficiency for grouping poles into discrete projects
    - Use available money for sizing projects
    - Separate 20A projects
    - Separate Fairgrounds and other government agencies as private service laterals
    - Separate San Dieguito Lagoon SDG&E Projects
    - Use Cal Fire maps to identify Fire Zone Areas
    - Density/Zoning

Prioritization Criteria

(This topic has been updated since the April 15th discussion based on UPAC's efforts following City Council direction to revisit the fire risk exposure topic.)

UPAC has developed criteria for how conversion would be prioritized, which were presented to the City Council in October 2018 and April 2019. Based on City Council's feedback and further consideration with the Fire Chief, the recommended criteria have been further refined to be customer density (where fire hazard is not a primary concern) and/or fire safety. Blocks were evaluated based on these criteria as follows:

1. Customer Density = Meter Quantity / Pole Quantity (a measure of the services still connected to poles)

2. Fire Safety = Meter Quantity (in fire zone) / Pole Quantity (in fire zone)

3. Add results of (1) and (2) and Normalize for Ranking (where applicable)

The Customer Density calculation is based on the number of meters with overhead service laterals that are directly connected to the poles in each Block. A Block refers to a group of poles generally located in the same geographical location that have been identified as independent of each other based on logical termination points in the overhead circuitry, allowing each project to be constructed and energized independently. These Blocks are also scale-able, in that they may be adjusted in size to be smaller or broken down into sub-blocks (i.e., projects) if necessary, based on funding needs and/or SDG&E's circuitry and/or operational requirements and also to maximize Rule 20B credits.

1. Project Priority

UPAC's updated recommendations regarding the undergrounding boundaries and prioritizations are as follows.

A. <u>Undergrounding Regions:</u>
Based on feedback from the Fire Chief about the fire hazard and how fires are ignited, spread, affected by terrain, topography, weather condition, and fuel availability, it is recommended to partition the entire City into two regions 1. See attachment A of the Staff Report.

1. Fire Critical Region – This is the area most susceptible to ignite and spread to other areas based on fuel, topography, and exposure to high wind conditions) where utility poles could be an exacerbating factor is the region within the canyon area off San Dieguito Drive/Oribia and along the upper Crest Road rim, tentatively labeled as Area X1A.

2. Non-Fire Critical Region – This is the remainder of the City where fire started in Fire Critical Region could spread to via embers that could be in any direction. Use the current partitioning i.e., blocks for this region.

B. Project Priorities

1. Prioritize Non-Fire Critical Region solely based on Customer Density as defined previously.

2. There is consensus among Project Team and Finance Committee to begin the simultaneous design process for areas X1A and the 1A (in coordination with SDG&E). Working on area 1A gives valuable baseline information as the "pilot project."

Project Financing

- Begin with designing and bidding pilot project to gain a better understanding of what the actual project costs will be.

- Pay cash for design fees and consider borrowing only for construction costs. Using short-term bridge loans for smaller amounts may also be considered.

Reimbursement for Past Privately-Funded Projects

A key policy question is the topic of reimbursement for past undergrounding work funded by private property owners. This topic has been vetted from both a legal perspective and an operational/practical perspective with the resulting conclusion that reimbursing private property owners for prior work completed is not a viable option. From a legal standpoint, there are significant cautionary dynamics surrounding "gifts of public funds" in terms of understanding prior project costs (generally 10+ years ago).

Similarly, from a practical standpoint, there would be significant complexity in trying to figure out a manner to reimburse private property owners for their investments more than ten years later. In the case where undergrounding work was completed through an assessment district, even if individual properties were not supportive at the time of formation, those districts were established based on voter approval within the affected areas in accordance with California law. The private property owners have since enjoyed the benefit of their private investment for utility undergrounding.

These practical and legal dynamics, combined with limited Measure Q resources to fund the undergrounding project, led the Project Team to recommend not to reimburse for past work for privately-funded projects and assessment districts.

- With regard to reimbursement of work completed in the past by the private properties, there are substantial legal and practical issues related to reimbursing property owners who previously paid for undergrounding, having done so in the past with no expectation of reimbursement or obligation by the City to reimburse.
- Reimbursement of any costs for private undergrounding work (i.e., for private laterals) is particularly problematic, as any payment for private lateral work – reimbursement or in the future – is for private benefit versus public benefit and the industry standard is that property owners are responsible for their lateral work.

Privately-Designed Areas

There are several areas of the City for which privately-funded designs have been prepared. In evaluating the readiness of these projects to proceed and the cost estimates prepared for each of these areas, UPAC recommended not to proceed early with any of these projects because of the length of time necessary to get them ready for public bidding (which is only six less months than full design of a larger area) and because construction of the smaller areas would generally be much less cost-effective. The Consultant's conclusion (as of January 2019) is that all of them are essentially at the same stage of readiness and all of them need several months of additional work to be ready to begin the construction bidding process, including all the necessary work with the other utility companies. Based on this assessment, the recommendation of UPAC was not to proceed with any of these five areas as stand-alone, independent projects. However, two of them are located within the recommended larger pilot project Area 1A.

Financing Scenarios

The envisioned funding source for undergrounding of utility poles has been revenues from Measure Q, which is the additional one-cent general sales tax approved by Del Mar voters in November 2016. That funding source generates approximately $2.7 million annually and was also envisioned to fund the Downtown Streetscape Segment 1 Project and implementation of the Shores Park Master Plan.

As previously directed by the City Council, staff developed several financing scenarios based on various assumptions, which were discussed with UPAC, the UPAC Finance Subcommittee, and the Finance Committee. These scenarios simulated different financing alternatives, such as "PAYGO" which stands for "Pay As You Go" (or cash), long-term financing, and a mix of short-term and long-term financing, along with other scenarios such as the estimated cost for completion of the Shores Park Master Plan (modelling based on a cost of $13.5 million, which is an educated placeholder cost estimate).

Under current conditions, bond financing is not an option for this project because that would necessitate a public vote to approve the bond. However, shorter-term financing or leased asset financing (like the type of loan use for the Civic Center construction project) are potential options. Among the scenarios, the factors that vary based on the assumptions are 1) length of time to complete the project, and 2) total cost to complete the project. There is an inverse correlation;

financing the total project and completing it in a shorter time period would be more expensive than taking longer to do the project and paying cash as it accumulates.

All of the previously-considered scenarios showed that it is possible to fund the full cost to underground all utility poles using Measure Q revenues along with completing the redevelopment of Shores Park, both with long-term financing or PAYGO, with the variation yielding completion time frames ranging from 12 to 26 years, and costing in a range of $61 to $95 million (including construction cost escalation and financing costs where applicable).

As a next step, staff recommends that this topic be revisited by UPAC and the Finance Committee using the new citywide project cost range of $32-42 million and again as part of the decision process to move forward once the construction bids are received for the pilot project design.

ATTACHMENT C

Wildland Hazard & Building Codes

Fire Hazard Severity Zone Development

Fire Hazard is a way to measure the physical fire behavior so that people can predict the damage a fire is likely to cause. Fire hazard measurement includes the speed at which a wildfire moves, the amount of heat the fire produces, and most importantly, the burning fire brands that the fire sends ahead of the flaming front.

The fire hazard model considers the wildland fuels. Fuel is that part of the natural vegetation that burns during the wildfire. The model also considers topography, especially the steepness of the slopes. Fires burn faster as they burn up-slope. Weather (temperature, humidity, and wind) has a significant influence on fire behavior. The model recognizes that some areas of California have more frequent and severe wildfires than other areas. Finally, the model considers the production of burning fire brands (embers) how far they move, and how receptive the landing site is to new fires.

Fire Hazard - A measure of the likelihood of an area burning and how it burns (example: intensity, speed, embers produced).
Fire Risk - A measure of the potential for damage. Risk considers the susceptibility of what is being protected. Factors like defensible space, non-flammable roofs, and ignition resistant construction reduce fire risk.
Fire Hazard Zoning - A map of the fire hazard without considering the value at risk.
Hazard Scores - All State Responsibility Areas are rated moderate, high or very high fire hazard.

Fire Hazard Elements

Vegetation - Vegetation is "fuel" to a wildfire and it changes over time. Fire hazard considers the potential vegetation over a 50 year time horizon.
Topography - Fire burns faster on steep slopes.
Weather - Fire burns faster and with more intensity when air temperature is high, relative humidity is low, and winds are strong.
Crown fire potential - Under extreme conditions, fires burn the up into trees and tall brush.
Ember production and movement - Fire brands are blown ahead of the main fire spreading the fire and getting into buildings and igniting.
Likelihood of an area burning over a 30 - 50 year time period.

Hazard map uses

- Building construction standards on building permit
- Natural hazard disclosure at time of sale
- Defensible space clearance around buildings
- Property development standards such as road widths, water supply, address signs
- Considered in City and County general plans

Hazard Severity Zones are not intended for

- Tactical fire fighting
- Seasonal fire severity
- Insurance
- Setting project priorities

Fire Prevention Links

- CAL FIRE Fire Prevention

Fire Prevention (FP) Grants Program

Grants Contact List

- Defensible Space
- Fire Plan
- Wildland Fire Prevention Engineering
- Fire Safety Education
- Law Enforcement
- OSFM Wildfire Protection
- Wildland Hazard/Building Codes
- Fire Engineering
- Fire Planning Terminology

- Fire Prevention Efforts Fact Sheet

Wildland Hazard & Building Codes More Info

- Wildland-Urban Building Codes
- Public Involvement
- Fire Hazard Severity Zone Maps
- Homeowners
- Building Code Training
- Fire Information Engine Toolkit
- Building Materials Listing
- Publications
- Regulatory Process
- Fire Terminology
- Frequently Asked Questions
- Media Reports

Advancing Wildfire Safety

BEST IN CLASS WILDFIRE MITIGATION PROGRAM

SDGE
A Sempra Energy utility®

Since 2007, SDG&E has invested $1.5 billion in fire risk mitigation. This includes robust efforts to fire harden the power grid, enhance situational awareness, update operating protocols and build community partnerships to improve this region's overall ability to respond to wildfires.

Aerial Resources

Aircrane/Drones

SDG&E's Aviation Services Team coordinates the Aircrane, with a tank equivalent to the capacity of five fire engines, and unmanned aerial systems (drones) to support infrastructure assessments.

AIRBORNE WITHIN **15 MINUTES**
JOINS **7 LOCAL FIRE HELICOPTERS**

- **45** SECONDS TO REFILL ITS TANK
- **841** WATER DROPS SINCE 2010
- **887,117** GALLONS DROPPED TO PROTECT OUR COMMUNITIES SINCE 2010
- **2,650** GALLONS (> 5 FIRE ENGINES)

25 DRONES TO ASSESS INFRASTRUCTURE

Community Outreach & Partnerships

9 COMMUNITY RESOURCE CENTERS

Responding to requests from the public, SDG&E has established stationary Community Resource Centers to support residents impacted by extended Public Safety Power Shutoffs. These facilities provide snacks, water, information updates, and a place to charge phones.

PARTNERED WITH **81** NON-PROFIT COMMUNITY ORGANIZATIONS

Since 2011 SDG&E has partnered with 81 nonprofit organizations to enhance disaster preparedness, emergency response training, wildfire education and safety assistance in our region.

5 FIRE COORDINATORS

SDG&E has a team of fire coordinators with over a century of experience in fire behavior, firefighting and fire prevention. They serve as the direct link between SDG&E and emergency-response agencies (i.e., act as the single point of contact for the fire agency Incident Command System). They provide periodic updates to fire emergency personnel and SDG&E personnel.

Twitter.com/sdge Facebook.com/SanDiegoGasandElectric Instagram.com/sdge YouTube.com/SDGEWebmaster LinkedIn.com/company/san-diego-gas-&-electric

SDGEnews.com | sdge.com/wildfire-safety

Situational Awareness

Weather Network & Meteorologists

5 FULL-TIME METEOROLOGISTS

177 WEATHER STATIONS

TRACKS
HUMIDITY
WIND SPEED
TEMPERATURE

AMERICA'S MOST GRANULAR UTILITY-OWNED **WEATHER NETWORK**

SDG&E's meteorology team monitors weather and fire potential 24/7/365 and provides daily weather forecasts to employees, as well as local public safety agencies.

Santa Ana Wildfire Threat Index (SAWTI

Similar to a hurricane rating system, this index rates Santa Wind events on a scale from "Marginal" to "Extreme" based on weather and fuel conditions.

Alert SDG&E Camera System

In partnerships with universities, SDG&E has strategically placed 16 high-definition cameras at local mountaintops to help improve fire detection and monitor fires in real time. This state-of-the-art system streams views of the most fire-prone areas.

16 INFRARED, PAN-TILT-ZOOM CAMERAS

100 CAMERAS
IN 20 LOCATIONS TO MONITOR SEVERE WEATHER & FIRES

IN-HOUSE **FIRE BEHAVIOR MODELING**

Fire Potential Index

Produced daily, this 7-day forecast classifies fire potential within each of SDG&E's operating district based on weather and fuel conditions.

Fire Hardening

Pole replacement

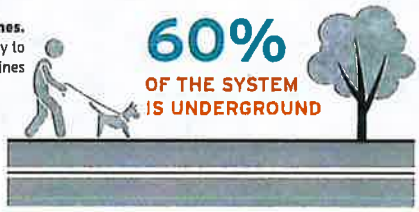
16,000 WOODEN POWER POLES UPGRADED

16,000 wooden power poles upgraded with fire-resistant steel poles with thicker, stronger wire. Upgrades target high-risk, fire-prone areas.

Undergrounding the electric system

SDG&E has **undergrounded 10,000 miles of electrical lines.** Currently, an effort is underway to underground 15 miles of 12kV lines in the backcountry and a small section of 69kV lines in one of the highest fire risk areas, including high-voltage transmission lines in fire-prone areas.

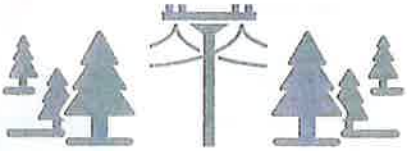
60% OF THE SYSTEM IS UNDERGROUND



Vegetation Management

463,000 TREES INSPECTED NEAR SDG&E POWER LINES

These trees are monitored and each tree is evaluated on an annual cycle.



40 CERTIFIED **ARBORISTS**

80 TREE TRIMMING **CREWS**

Operational Protocols

Disabling Switches

When the Fire Potential Index is elevated, all power line reclosing switches are turned off to prevent lines from automatically re-energizing after a fault has been detected. The reclosers remain off until the index returns to normal for an extended period.

New innovations help minimize customer outages

SDG&E engineers developed a way to sectionalize electric circuits to reduce the number of customers impacted during a Public Safety Power Shutoff (by up to 73%).

Wildland Fire Prevention Resources

Throughout the fire reason, SDG&E contracts for fire trucks and trained firefighting personnel. These resources are dispatched with SDG&E crews working in the field during days when wildfire threat is high.

Safety Patrols

After a Public Safety Power Shutoff, crews visually inspect overhead power lines – by foot and with helicopters – to check for equipment damage prior to re-energizing lines.

City of Del Mar

June 11, 2019

Scott Huth; City Manager
City of Del Mar
1050 Camino Del Mar
Del Mar, CA 92014

Dear Scott,

This letter is in response to questions raised by you as well as the Undergrounding Subcommittee during our meeting a couple weeks ago regarding wildfire risk and overhead powerlines.

Crest Canyon Park is located on the eastern side of the City of Del Mar, south of the San Dieguito Lagoon State Marine Preserve and Del Mar Fairgrounds, and west/northwest of the City of San Diego neighborhood of Del Mar Heights. The city boundary between Del Mar and San Diego runs north/south almost splitting the canyon in two.

Crest Canyon Park is comprised of coastal sage scrub, chaparral and some mix of large, rare Torrey Pine trees. The fuel bed is continuous except for a small north/south trail system and areas where cliff faces prevent growth of native vegetation. Comprised mostly of native vegetation ranging in height from two to eight feet, excluding the intermixture of pine trees, the alignment of the fuel bed on a northern aspect with north/south alignment creates significant risk during a Santa Ana wind driven fire.

Fire is influenced by three factors; fuel, weather and topography. Due to radiant heat and convection, fire will burn hotter and travel faster uphill to the ridgetop. During a Santa Ana wind event, fire path and speed will be determined by wind direction and speed. As discussed in our meeting, a primary concern with a wind driven fire is the flying embers that are carried by the wind in front of the main body of fire. These embers can embed in a fuel source (vegetation, houses, etc.) and start additional fires. However, there is no way to predict when and where an ember will start a fire.

With the fuels that are in Crest Canyon and also the alignment of the canyon during a Santa Ana wind event, it is the Fire Department's opinion that Crest Canyon poses a greater threat in terms of wildfire damage than other parts of the City. This is NOT to say that other parts of the City are not at risk. As seen in years past, devastating wildfires can happen anywhere in Southern California. However, it is our opinion that Crest Canyon poses the greatest risk for

wildfire issues in the City. The influencing factors mentioned above would be the same in other areas of the City.

It is for these reasons that in terms of prioritization of undergrounding due solely to wildfire issues, the fire department believes that the highest priority would be Crest Canyon up to the ridgetop (Crest Rd.). While other areas of the City are still at risk of wildfire, the risk would be equal as fuel and topography are fairly consistent throughout other areas of the City.

Please feel free to contact me if you have any questions.

Respectfully,

Mike Stein
Fire Chief
760-633-2801 **Office**
760-685-0626 **Cell**

July 29, 2019

Scott Huth
City Manager
City of Del Mar
1050 Camino Del Mar
Del Mar, CA 92104

Dear Mr. Huth:

SUBJECT: Response to City of Del Mar's question re undergrounding design expiration timelines

It's common business practice for SDG&E to collect an engineering fee in advance of designing an undergrounding project. Once a project is finalized, the engineering fee would then be credited toward the cost of the overall undergrounding project. For the City of Del Mar, SDG&E has agreed to not charge an upfront engineering fee, due to the City's tax revenue obtained through Measure Q.

As the market and industry continue to evolve, it's important to address potential changes in costs for labor, materials and transportation. Once an undergrounding project design is complete, SDG&E will create an estimate that includes labor, materials etc. That estimate will then be valid for 90-days. If cost quotes are not negotiated within 90 days, an engineering fee will be due to SDG&E and the project cost estimate will expire. This practice protects SDG&E ratepayers from being unfairly burdened with design costs for unapproved projects and possible increases to labor and/or material costs. It's important to note the engineering fee could be credited to future cost quotes for the same project for up to one year, and the undergrounding design itself, in most cases, would not necessarily need to be redesigned. If a project does not receive municipal approval within a year, then the engineering fee will be retained by SDG&E, as non-refundable. At this point, the participating parties would also be required to conduct another site walk of the project, to ensure changes to the infrastructure and surroundings have not occurred. If there aren't any notable changes observed, then the City may be able to utilize the prior design and merely get an updated project quote that incorporates current labor, material and transportation costs.

Finally, the CPUC may require changes to industry safety standards that could impact future undergrounding projects. While these changes don't happen often, they could trigger a future change in design (i.e. a project quote expired, and a new CPUC safety standard was implemented in the meantime).

We look forward to continuing our partnership with the City of Del Mar on the citywide undergrounding program. Please let me know if you have any additional questions.

Regards,

Katie Scanlan
Public Affairs Manager
San Diego Gas & Electric Company