

**PERMIT APPLICATION BACKLOG REDUCTION  
DRAFT ACTION PLAN**

**Engineering and Permitting**

**September 16, 2016**

**SCAQMD staff would like to acknowledge the contributions of the Permit Streamlining Task Force to the ideas presented in this Draft Action Plan.**

# TABLE OF CONTENTS

## Table of Contents

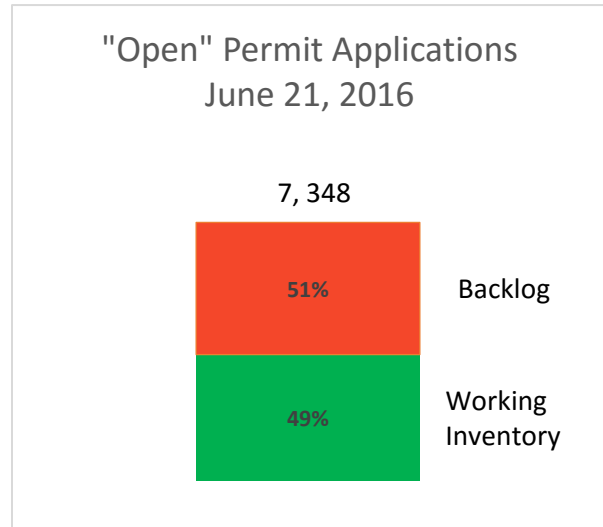
<b>Executive Summary</b> .....	1
<b>Introduction</b> .....	3
<b>SCAQMD’s Permitting Process</b> .....	3
<b>Anatomy of the Backlog</b> .....	6
<b>Common Hurdles that Prevent Expeditious Permit Processing</b> .....	11
<b>Challenges SCAQMD Faces in Eliminating the Backlog</b> .....	14
<b>Action Plan</b> .....	15
<b>Permit Processing (Production) Capacity Improvement Measures</b> .....	16
<b>Permit Processing Efficiency Improvement Measures</b> .....	18
<b>Additional Customer Service and Transparency Improvement Measures</b> .....	25
<b>Implementation Scenarios</b> .....	27
<b>Data and Assumptions Used in these Analyses</b> .....	28
<b>Scenario I:</b> .....	29
<b>Scenario II:</b> .....	31
<b>Conclusions</b> .....	35

## Executive Summary

SCAQMD has gradually accumulated a backlog of permit applications that have not been processed within a timely manner. Specifically, as of June 21, 2016, the overall inventory of 7,348 “open” permit applications consisted of 3,624 in the working inventory (*i.e.*, within expected processing timeframes) and 3,724 in the backlog (*i.e.*, beyond the expected processing timeframes). While the age of applications is the primary characteristic used in this analysis to distinguish between backlog and working inventory, there are certain aged applications included in the backlog for reasons that are beyond staff’s control and should be categorized as part of the working inventory. Staff intends to further refine its tracking system and criteria used and provide on a more real-time basis an updated account of the true backlog.

Staff developed this Draft Action Plan with the following objectives: eliminate the backlog, issue permits in a timely manner, improve customer service, increase transparency, and keep the environment whole. Staff will accomplish these

objectives by implementing several immediate action measures and longer-term measures identified and included in the Draft Action Plan.



Staff designed the measures in the Draft Action Plan to be aggressive and optimistic, yet achievable with adequate and timely support. These measures include improvements to operational efficiency (including policy solutions and changes to permitting procedures), expanded use of active supervision and management, permit streamlining, automation, training, and temporary and permanent staffing changes. The Draft Action Plan also includes a commitment to periodically review resource allocation among the various permitting teams and redistribute such resources as necessary to ensure optimal balancing of workload with production needs.

Staff will solicit input from the Permit Streamlining Task Force and other interested parties at one or more listening session(s) regarding implementation of the Draft Action Plan’s measures. SCAQMD will also form several teams and task them to work on the various measures identified to ensure timely implementation of the Draft Action Plan. These teams will be staffed by rank and file as well as management staff from Engineering and Permitting and representatives from other Offices, as necessary. Oversight and follow through will be provided at the DEO and COO level with frequent reporting to and feedback from the EO.

As a point of reference, an open application reduction effort was conducted in the 2001 and 2002. That effort processed 4,261 out of a starting inventory of about open 10,900 applications and reduced the inventory by approximately one third. That effort lasted about nine months and involved the full time efforts of one Senior Engineering Manager, two Senior Engineers, four staff Engineers, and 25 temporary engineers at a cost of \$2.5 million (\$3.4 million in 2016 dollars). The Draft Action Plan seeks to accomplish a more comprehensive effort to eliminate the backlog rather than simply reducing the

inventory of open applications. Furthermore, it was designed to do so in a much more sustainable way by combining intensive processing for immediate results with efficiency and automation measures that will prevent regrowth of the backlog in the future.

The Draft Action Plan explores two different plausible timelines and corresponding costs to eliminate the backlog. Staff anticipates that the backlog can be eliminated in two years at a cost of \$4.4 million (\$2.2 million per year) or in approximately 15 months at \$11.9 million. The two-year backlog elimination scenario provides an aggressive and yet realistic and cost-effective pathway to backlog elimination by largely depending on improved utilization of existing staff resources and some overtime, coupled with operational and efficiency improvements. The two-year scenario seeks to eliminate backlog by establishing quarterly backlog reduction targets of 12.5 percent. The second scenario reflects a further expedited backlog reduction effort that seeks to eliminate the backlog in 15 months. The second scenario will take about one year after key program elements are in place but deploying those elements will add several months to the process. In addition to the improved utilization of existing staff resources and efficiency improvements included in the two-year scenario, it relies on hiring, training, and deploying a large number additional permit engineering staff on a permanent and temporary basis and, hence, the higher cost. This scenario establishes quarterly backlog reduction targets of 25 percent. The cost estimates for either scenario above do not include the costs of developing the various online tools for permitting, computer database and system upgrades and other automation efforts. Such tools and upgrades will be developed in phases and it is currently estimated that these efforts will cost \$1 million per year for five years.

The body of the Draft Action Plan includes a more detailed description of the specific timeline for the formation of the various ad-hoc teams, development and implementation of the efficiency measures, and final and interim backlog reduction targets.

This Draft Action Plan establishes a roadmap for staff to follow in their efforts to expeditiously eliminate the backlog. Staff intends to stay true to the continuous improvement principle in executing this Draft Action Plan. As such, it is a living document that will be revised and updated over time to reflect information gleaned through the implementation process. For example, any measures that turns out to be more effective than anticipated will be prioritized while any that prove to be ineffective will be abandoned.

Staff has already commenced implementation of certain immediate action measures of the Draft Action Plan. Initial results from the first two months (July, August) of implementation are encouraging, yielded a 14 percent reduction in the “open permit applications” inventory. Staff will be providing quarterly progress reports to the Stationary Source Committee to inform Committee members on progress made in meeting the backlog reduction targets and implementing the efficiency improvement measures.

## Introduction

A variety of factors has led to the accumulation over time of permit applications pending review and permit action (approval, rejection, cancelation, or denial)<sup>1</sup>. This action plan was prepared to establish a clear roadmap to guide staff efforts to resolve the issues preventing permit action on the aged applications and to balance the rate of production (permits issued) with the rate new applications are received in a sustainable manner. The key objectives this action plan intends to accomplish are to simultaneously reduce the backlog, improve customer service, and enhance transparency—all while keeping the environment whole; it does not call for “corner cutting” measures that could result in reduced protection of public health. It should be noted that many of the measures identified in the action plan are reflective of an intensive brainstorming effort conducted with all levels of staff involved in permitting as well as input received from stakeholders. More specifically, this action plan identifies immediate action measures as well as long term measures that will require more time to implement. It also includes backup measures that will only be implemented if the primary measures prove to be insufficient.

In developing and executing this action plan, staff intends to stay true to the continuous improvement principle. As such, it is not intended to be a static document but rather a dynamic/living document that will be updated periodically to supplement it with additional strategies and measures as they are identified in the future and delete any measures that are proven to be ineffective in producing desirable results. All figures in this action plan quantifying the open application inventory, the backlog, rely on a June 21, 2016 baseline, at which point the inventory was composed of 7,348 open application of which 3,724 were backlog (defined below) and the remaining 3,624 were working inventory.

Having a good understanding of the permitting process and the various facets of the accumulation of pending applications, is critical to identifying and prioritizing lasting solutions to the backlog challenge. With that in mind, the following two sections describe these two topics.

## SCAQMD’s Permitting Process

SCAQMD rules require any equipment/process that may result in the issuance or control of any air contaminant to obtain a permit, unless such equipment/process is explicitly exempt from permitting in Rule 219 due to the insignificant level of emissions associated with its operation. SCAQMD employs an essentially two-step permitting process. The first step is the permit to construct step and the second is the permit to operate step, as described below:

### 1. **Permit to Construct (PC)**

Rule 201 – Permit to Construct requires a permit to construct prior to installing, building, modifying, or replacing equipment that can cause or control air pollution emissions. Facility operators are required to submit applications describing their proposed projects for SCAQMD review prior to initiating installation or construction. This provides engineering staff the opportunity to perform pre-construction review to determine if the proposed project can be expected to comply with applicable air quality rules and regulations. If so, a permit to construct is issued authorizing the

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<sup>1</sup> Total inventory of 7,348 open applications as of June 21, 2016.

applicant to install/construct the project and to commence operation once construction and installation are complete. However, if the proposed project is not expected to comply, the reviewing engineer explains the reason(s) compliance is not expected and allows time for the applicant to revise the proposal so as to overcome the obstacles to compliance. Thus, this preconstruction review process provides the crucial benefit of resolving most compliance problems before the applicant has invested in the purchase, construction, and installation of equipment and makes it far more cost effective for the applicant to correct deficiencies. Denial of these applications is a last resort reserved for situations in which the applicant is unable or unwilling to resolve the compliance issues identified through the review process. Note that Rule 201 does not apply to applications for change of condition, so such applications proceed directly to the permit to operate step without the need for a permit to construct. It should also be noted that once equipment is constructed in accordance with the conditions specified in a Permit to Construct, the Permit to Construct can serve as a Temporary Permit to Operate (see Rule 202 – Temporary Permit to Operate).

## 2. **Permit to Operate (PO)**

After a project has been implemented pursuant to a permit to construct and has been in operation long enough to conduct any required source testing to verify compliance, it is subject to review by the SCAQMD engineer to confirm that the installation is as described in the application package and consistent with the permit to construct and that it is operating in compliance. Provided such is the case, a permit to operate that supersedes the permit to construct is issued. If the installation is consistent with the application and the conditions imposed on the permit to construct yet is found to be out of compliance with an applicable rule or regulation, the applicant is afforded the opportunity to rectify the compliance issues such that the equipment can be operated in compliance. A permit to operate is issued upon demonstration that the equipment is now operating in compliance. As with the permit to construct phase, denial is reserved for situations in which the applicant cannot or will not resolve the obstacles to compliance.

In some cases, facility operators apply for a permit for change of conditions. Such applications seek only to change the manner in which permitted equipment is operated without installing, removing, or physically modifying equipment. Because such projects do not involve a construction/installation phase, they are exempt from the permit to construct phase of the permitting process and are only reviewed for permits to operate.

**Permit to Operate without a Permit to Construct (PO no PC):** Some facility operators fail to comply with Rule 201 and perform construction/installation without benefit of preconstruction review or a permit to construct. In addition to being a violation subject to enforcement action, this is a risky approach because engineering review does not occur until after construction/installation is complete. As such, there is the possibility that the review will identify compliance problems that could have been resolved much more efficiently and cost-effectively if they were identified prior to construction/installation. In some cases, equipment is installed that never would have received a permit to construct because it cannot be made to comply, a problem that cannot be resolved by any means short of complete replacement of the non-compliant equipment.

**Title V Facility Permits:** SCAQMD administers a Title V permit program for facilities that are federal major sources. These facilities are issued a single permit for all of their sources rather than

individual permits for each “permit unit” (source or, in some cases, interrelated grouping of sources) at the facility. Beyond this structural change, the Title V permitting process involves mandatory public notification and subsequent public review and comment periods, as well as notification to the U.S. EPA and a 45-day U.S. EPA review periods in many cases. Staff is required to prepare substantial additional documentation in such cases. The document preparation, public and U.S. EPA review periods, and responding to any comments received substantially increases the time required to issue permits both directly (time needed for each of these steps) and indirectly (significant additional workload).

**Emission Reduction Credit Applications:** SCAQMD also receives and process a relatively small number (in the roughly 200 per year range) of applications pertaining to Emission Reduction Credits (ERCs). Some of these applications are for the initial generation (banking) of ERCs when a facility experiences a surplus emission reduction. The balance of ERC-related applications are associated with transferring ownership of ERCs from one entity to another. Banking applications are in the minority but require substantial analysis and are quite time consuming to process, while the majority of ERC applications are related to ownership transfers and are quickly processed.

**Change of Operator & Administrative Permit Amendments:** SCAQMD receives applications to change the operator identified on an existing permit from one entity to another and for other administrative changes to existing permits (*e.g.*, a change to an equipment description that does not impact the source’s emissions characteristics). Such applications are generally processed quickly, although in some cases there are extenuating circumstances that require additional staff time and that result in delays.

**Registration/Certification Program:** To facilitate the expeditious issuance of permits, SCAQMD has developed a Certification/registration program. Equipment manufacturers that want to take advantage of this program can voluntarily apply to have their standard, off-the-shelf equipment certified by SCAQMD as meeting all applicable requirements. When they do so, they are issued a Certified Equipment Permit (CEP) documenting that compliance has been established. Facility operators that purchase certified equipment can obtain permits to operate it through a registration process rather than through the traditional application process. The fee for the registration process is less than the traditional permit application fee for the same equipment and the turnaround time for permit issuance is very short. Currently, only emergency internal combustion engines are eligible for permitting through the Registration/Certification program.

**Filing Program (Rule 222):** As an alternative to the permitting that is applicable to more complex equipment/processes requiring a thorough and detailed evaluation of emissions and compliance, SCAQMD has also developed a streamlined program that is applicable to certain classes of equipment/processes, which are less complex, have smaller emission profiles and similar operational characteristics that do not warrant detailed individual engineering review. Operators of such equipment are afforded with expeditious processing by registering/filing with the SCAQMD by simply filling out a form that comes with pre-defined conditions rather than applying for a permit. Such filings are akin to over-the-counter permits and can be obtained at much reduced time and cost. A wide variety of equipment is eligible for such filing, as listed in Rule 222 - Filing Requirements For Specific Emission Sources Not Requiring a Written Permit Pursuant to Regulation



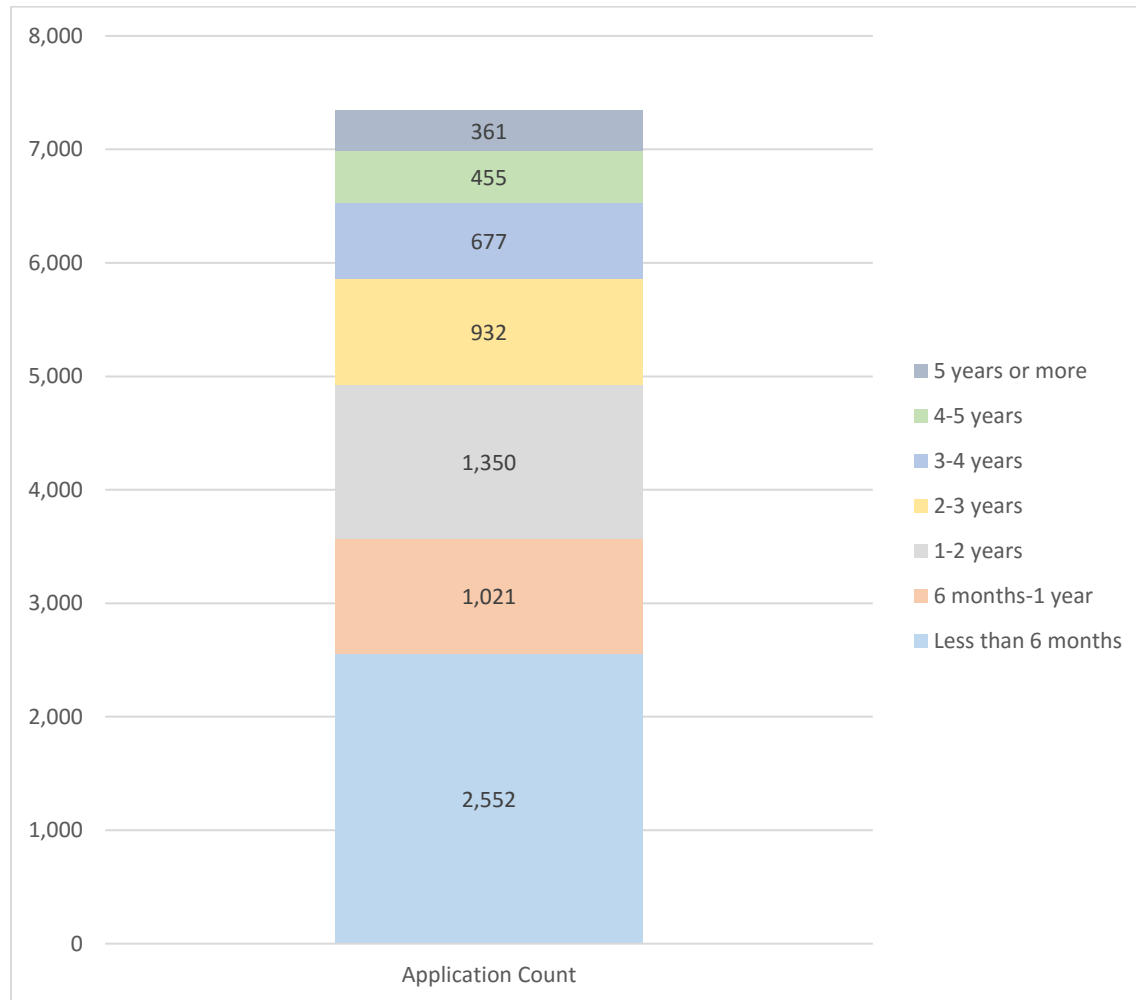
II. For example, certain boilers, engines, microturbines, printing equipment, and coating equipment are eligible for this program.

## Anatomy of the Backlog

As of June 21, 2016, there were 7,348 pending applications upon which no final action was yet taken (“open” applications). However, it is important to understand that this figure is a snap shot in time of pending applications, reflecting the difference of in-flowing permit applications into the permitting system and out-flow of permits issued. As such, the pending applications sum should not be considered as backlog in its entirety but rather it should be viewed as the combination of working inventory of permit applications and the “true” backlog of aged applications. In an effort to better understand the nature and size of the backlog and especially to help prioritize our future actions, pending applications statistics were analyzed in several different ways, as summarized below.

First, we looked at the aging characteristics of the 7,348 pending applications. Figure 1 provides vital statistics on the age distribution of the pending applications. It is important to note that 35 percent of the pending applications were less than six months old (180 days) and 49 percent of the pending applications were less than a year old, while the remaining 51 percent were older, with many applications older than four or five years. While there is a consensus that the aging statistics of Figure 1 are quite revealing, pointing to the unacceptably high number of pending applications and equally unacceptably high percentage of aging applications, it does not provide a clear understanding of what fraction of these pending applications reflect working inventory versus “true” backlog. As a first level rough approximation, all permit applications residing in the permitting system for more than six months (approximately 4,800) could be considered as backlog, while the remaining (approximately 2,550) less than six months old applications would be reflective of the working inventory.

**Figure 1**  
**Open Application Age Distribution as of June 21, 2016**

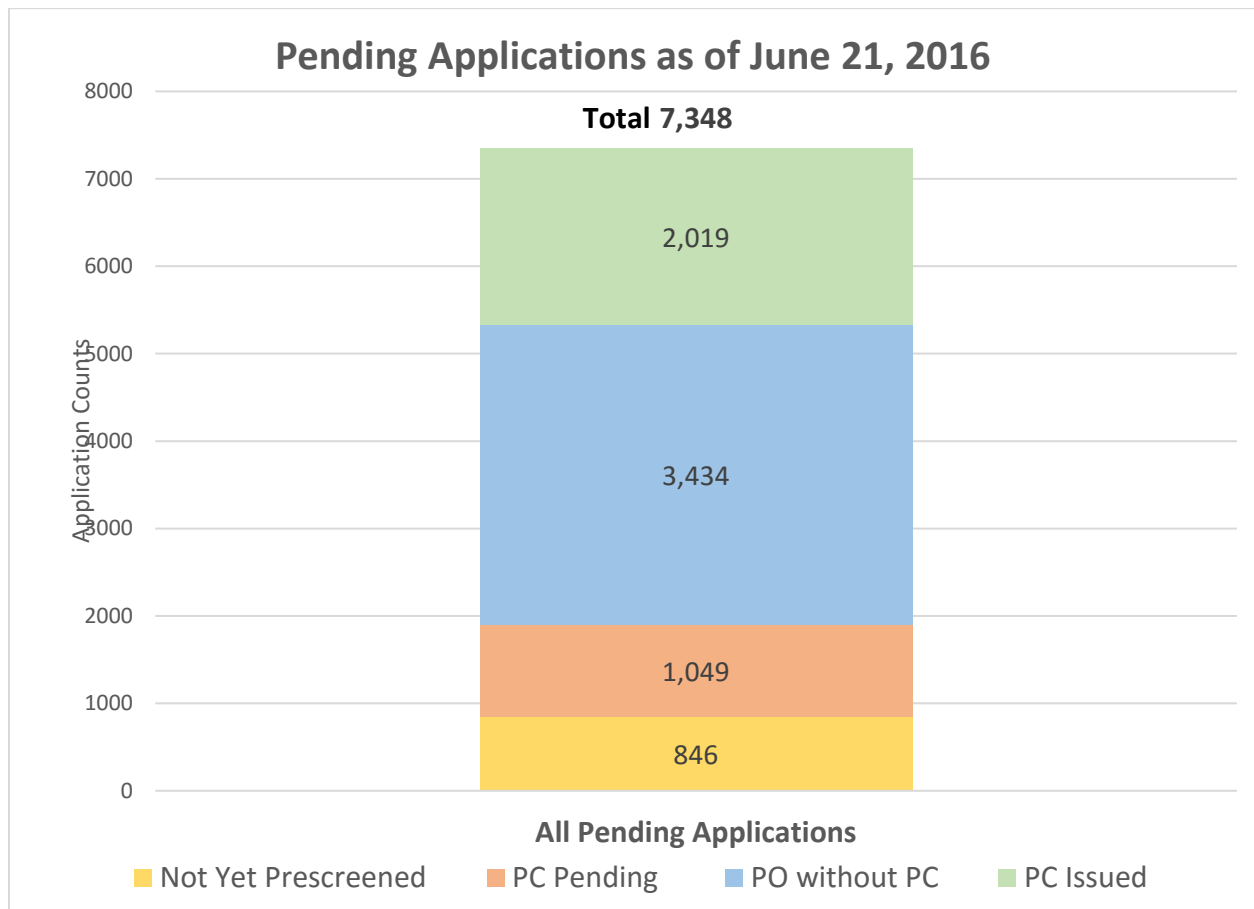


To refine this first level approximation, and to help with our future prioritization efforts, it is important that we look deeper (within the constraints of our current permit application tracking system) to better appreciate the distribution of those applications between various types and statuses, and therefore which applications constitute a backlog of work that is overdue and which are simply a working inventory that is on track for timely completion. To that end, Figure 2 provides the anatomy of the 7,348 pending applications as a function of the permit type, including Permit to Construct (PC) issued, pending PC, PO without PC, and applications that have not been prescreened<sup>2</sup>. Of the 7,348 pending applications, PCs have already been issued for 2,019 of these applications, which, as described in the previous section, can serve as temporary permits to operate. While taking action on all segments of the

<sup>2</sup> Prescreening is the process of reviewing an application package to determine if it is complete. The engineer contacts the applicant and explains what information, forms, and/or fees are missing and provides an opportunity to provide those materials. If it is not complete. If the applicant is unwilling or unable to do so the application will be rejected (this is uncommon).

pending applications is important, prioritizing the processing of the remaining 5,300 pending applications and focusing resources accordingly may be advisable. It is especially important that **efforts are focused on expeditiously processing PC applications for new equipment and processes to allow businesses to operate, while simultaneously investing our resources to reduce the application backlog.**

**Figure 2**  
**Distribution of Open Applications as of June 21, 2016**



To further refine and optimize our prioritization strategy and future actions to reduce backlog we conducted yet another level of analysis on the time sensitivity of pending applications utilizing current SCAQMD regulatory time frames. A brief description of these time frames follows.

Rule 210 – Applications establishes the following timeframes within which the Executive Officer is to grant or deny a permit to construct [refer to subdivision (d)]:

- “Within 180 days after the application has been deemed complete, provided the project has been approved by the lead agency, or, if not so approved, as expeditiously as practicable, not to exceed 180 days, after the project has been approved by the lead agency” if SCAQMD is a responsible agency under the California Environmental Quality Act (CEQA);
- “Within 180 days after the certification of the Environmental Impact Report or 60 days after approval of a negative declaration or determination the project is exempt, or, if no formal

determination is made, 60 days after the determination should have been made” if SCAQMD is a lead agency under CEQA; and

- Within the timeframes specified in Rules 3003 – Applications and 3005 – Permit Revisions for significant, de minimis significant, and minor Title V permit revisions.

Rule 210(d) also specifies that these time limits can be extended by 90 days upon written agreement between the applicant and the Executive Officer and resource recovery projects subject to Health and Safety Code Section 42314.2 may receive additional extensions as specified therein. Thus, the deadline to issue or deny a permit to construct varies from case to case. As an extremely conservative assumption, and for the purposes of this exercise, we treated all applications for permit to construct that have not been approved or denied within 180 days from application receipt date (as opposed to the deemed complete date, which can be as much as 120 days after the receipt date under certain circumstances) as part of the backlog. There were 538 such applications pending action on permit to construct as of June 21, 2016.

Once a permit to construct is issued, the facility has one year to construct the equipment and conduct any required source testing. This timeframe can be extended in one-year increments upon request of the applicant and approval of the Executive Officer. The first request is typically granted without question while subsequent requests are subject to more scrutiny but are granted within reason, such as if the applicant is making progress on construction. While some projects involving “off-the-shelf” equipment can be completed quickly, many large projects take several years to complete construction and some, including power plants, can take five years or more. Permits to construct generally specify that the operator has up to 180 days after commencing operation to conduct troubleshooting, get everything operating smoothly, and conduct a source test. The source test contractor then needs additional time to prepare the report, after which the facility submits it to SCAQMD for review and approval. All of these steps need to occur before the permit to operate can be prepared and approved.

Rule 202 – Temporary Permit to Operate, specifies that the applicant notify the Executive Officer prior to operating equipment issued a permit to construct and that, upon such notification, “the permit to construct shall serve as a temporary permit for operation of the equipment or agricultural permit unit until the permit to operate is granted or denied.” The result of this is that, while there is no way to determine which (if any) of the applications that have been issued permits to construct and are pending permits to operate are overdue short of manually evaluating the details of each. There is generally less urgency to take action on these applications because they are able to legally continue operating without risk of violating the requirement to obtain a permit to operate during the interim. Air quality is not impacted because the applications have already been subject to engineering review and determined to be in compliance with applicable air quality rules and regulations. Staff is considering such applications to be part of the backlog if it has been three years or more since the permit to construct was issued. There were 491 such applications in the backlog as of June 21, 2016. We will improve our application tracking system in the future so that we can accurately and readily identify each application awaiting conversion from permit to construct to permit to operate as timely or backlog.

In some cases, facility operators construct/install sources without obtaining a permit to construct even though doing so is a violation of Rule 201 – Permit to Construct. When they subsequently file applications for such sources, either on their own initiative or in response to compliance action taken by

an inspector, they are subject to engineering review<sup>3</sup> for permit to operate without going through the permit to construct phase. While these applications are generally not considered urgent by the applicant because, pursuant to Rule 202(c), the application acts as a temporary permit to operate, they are a priority for SCAQMD because the sources are operating without having been subject to engineering review to determine if they are in compliance with applicable rules and regulations. SCAQMD rules do not specify a timeframe to act on such applications, but we consider them part of the backlog if not approved or denied within 180 days of receipt. Furthermore, certain other applications, such as those for change of operator or change of conditions, do not involve construction so are processed for permit to operate without going through the permit to construct process. There were 2,492 such applications for permits to operate not subject to the permit to construct process in the backlog as of June 21, 2016.

The final group of applications contributing to the backlog is applications that have not been deemed complete (or rejected/denied as incomplete) in a timely manner. Rule 210(b) provides the Executive Officer 30 days from receipt of an application for permit to construct to inform the applicant if the application contains sufficient information to be deemed complete. If it does not and the applicant provides additional information, a new 30-day clock for the Executive Officer to determine if the application contains sufficient information begins. Rule 210(c) further specifies that if an application for permit to construct continues to be incomplete 120 days after receipt it shall be denied unless the Executive Officer has extended the time in writing. SCAQMD rules do not specify timeframes in which the Executive Officer is to make completeness determinations on applications other than those for permits to construct (*e.g.*, change of condition, permit to operate without permit to construct). Nevertheless, all applications are conservatively considered part of the backlog if they have not been deemed complete or rejected/denied within 60 days of receipt. As of June 21, 2016 there were 203 such applications in the backlog.

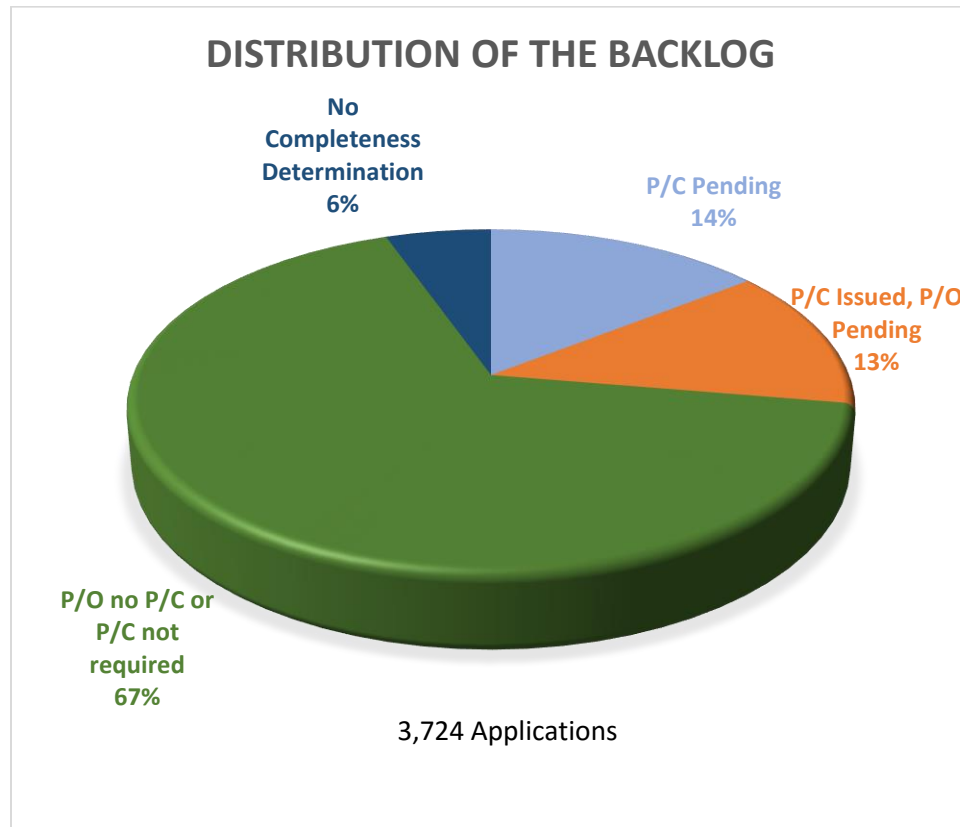
Based on the above analysis, the backlog consisted of 3,724<sup>4</sup> applications overall (roughly half of the 7,348 application inventory) as of June 21, 2016. Two-thirds of that backlog is attributable to applications for permit to operate either without benefit of permit to construct (unlikely to be cause for concern on the part of applicants) or for which permit to construct is not required. The distribution of the backlog between the above-discussed categories on that date is summarized in Figure 3:

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<sup>3</sup> In many cases, these applications are also subject to additional types of review, such as public review via the public noticing process and review under the California Environmental Quality Act.

<sup>4</sup> As engineers work on their applications they currently manually updating a tracking spreadsheet with more granular status information than is tracked by the enterprise database. This will enable us to refine the quantification of the backlog. Thus, we expect to have more accurate backlog figures in about a month.

**Figure 3**  
**Distribution of the Backlog**



It is important to reiterate that prioritizing efforts to reduce the backlog does not, in any way, imply ignoring the expeditious processing of working inventory applications.

### Common Hurdles that Prevent Expeditious Permit Processing

There are multiple regulatory as well as non-regulatory hurdles that adversely impact the expeditious processing of permits. This section attempts to capture key examples of these hurdles.

**Staffing:** For the last several years SCAQMD had a high vacancy rate (more than 20% for E&P). These vacancy rates impacted not only staff engineer levels involved in processing permit applications but also senior engineer and supervisory levels, typically involved in reviewing processed applications and pending permits, adversely impacting the production or permit processing capacity of the agency.

**CEQA:** The SCAQMD is required by state law to review discretionary permit project applications for potential air quality and other environmental impacts. While the majority of permit applications submitted are exempt from CEQA, there is a subset of applications that necessitate more detailed CEQA analysis, which may elongate the permitting process considerably beyond 180 days. Currently, all such projects are included as part of the backlog because of the limitations of the tracking system. Therefore,

it will be important to further refine our existing tracking system to track such projects separately and communicate the timeliness of such applications appropriately. There are currently 41 applications of various ages upon which no action can be taken pending completion of the CEQA process.

**Health Risk Assessment, Modeling and Source Testing Report Review:** Often permit applications necessitate the development and submittal of Health Risk Assessment, Modeling analysis and/or Source test protocol and Source Testing results, which must be reviewed by other offices in the SCAQMD, which can further prolong the permit review process, especially if their submittal trails the original permit application.

**Best Available Control Technology (BACT)/Lowest Achievable Emission Rate (LAER) Analysis:** BACT analysis is a critical step in the review of a permit application for new equipment and processes. While BACT compliance determination normally is not an issue for minor sources, conducting a comprehensive BACT/LAER determination for major sources may elongate the process significantly because of the obligation to conduct a national search of similar equipment/processes. Availability of up to date, well established guidelines can help optimize permit application evaluation time.

**Large Projects:** Permit processing for large facilities or projects may take years and is often beyond the control of SCAQMD. For instance, for large projects once a PC is issued, it may take the facility years to purchase and install equipment and conduct the necessary source testing prior to obtaining a PO. For instance many power plant projects often take five to seven years to complete and receive California Energy Commission approval prior to obtaining a permit to operate from the District. Similarly, many refinery-related and other major projects may fall into this multi-year category, delaying the issuance of a permit to operate. Also, it is not uncommon that a permit applicant alters the project mid-stream during the permit evaluation process or ask SCAQMD to halt processing the permit application in anticipation of significant modification to the scope of the project for financial or other reasons. The current tracking system does not allow tracking such permit applications separately and they appear as part of the backlog. Staff is working to manually track such situations on an application-by-application basis until such time as the electronic tracking system can be updated to provide this functionality. Therefore, we will be able to provide refined backlog numbers within a month.

**New Source Review/ERCs:** When a permit application for a new/modified equipment/process is received, in addition to the BACT/LAER determination, the applicant often is required to provide Emission Reduction Credits (ERCs) to offset equipment-related emissions. The applicant is obligated to find a seller in the open market, agree to a price, obtain title to the ERCs and ultimately surrender them to the SCAQMD, all time consuming steps that have the propensity of elongating the process beyond traditional time frames. The amount of time this adds to the permitting process is highly variable, but it can be a couple of months.

**Additional information:** In addition to the initial information submitted as part of the original permit application, often the subsequent engineering evaluation of the permit project by the permitting engineer may result in requesting the applicant to submit additional information to allow completion of the permit evaluation process. Such additional information requests may delay the permitting process significantly, especially if the applicant takes a long time to provide the information.

**Public Notice:** Rule 212-Standards for Approving Permits and Issuing Public Notice, requires public notice to be given for certain permit applications, especially for projects located near schools. Current

noticing practices add at a minimum 45 days to the process, which may be further elongated if there are public comments submitted that must be responded to and public meetings held. Refinement of SCAQMD's current Public Noticing practices could further streamline the permit process without compromising the public's right to know.

**Fees:** Current District policy requires no less than 85% of the permit fees to be submitted prior to accepting a permit application with the balance to be paid prior to permit issuance. This creates delays because a permit cannot be issued until the applicant pays the fees in full even though the evaluation process is complete.

**Notice of Violation (NOV), Notice to Comply, Variance, Order for Abatement:** When there is a pending NOV with the facility, new permits cannot be issued to the facility even if the permit evaluation process is complete, unless and until the facility is in compliance, which also may cause significant delay in permit processing. Similarly, permits cannot be issued to facilities operating under variance or an order for abatement or that are correcting a compliance issue pursuant to a notice to comply. The current tracking system does not allow tracking such permit applications separately and they appear as part of the backlog. However, recently implemented manual tracking by engineers indicates that there are currently 47 permits that cannot be approved and issued due to non-compliance. .

**Rule Interpretation and Policy Development:** Ambiguities in regulatory language sometimes necessitate rule interpretations and development of policies to address real world scenarios and situations that were not anticipated during the rule development process.

**Title V and RECLAIM Permits:** Title V and RECLAIM are complex programs and such permits are a lot more time consuming to process. In addition to the complexity of the evaluation process and public noticing requirements, all Title V permit applications other than those for administrative revisions require U.S.EPA review, which automatically adds 45 days to the processing time. This, along with responding to comments from public notices, further lengthens the permit process. There are currently 384 active Title V facilities within the SCAQMD.

**Computer System:** Current computer system and databases have limitations that contribute to further hindering permit processing. For example, it is sometimes necessary to keep multiple applications open for the same source to maintain the integrity of the emissions accounting for that source.

**Field Evaluation:** In evaluating permit applications without a prior Permit to Construct or converting a Permit to Construct to a Permit to Operate, current permit evaluation practices require the permit engineer to conduct a field visit to review the equipment as part of the evaluation process. While this is a valuable experience for the engineer and useful step for complex applications, it may elongate the process unnecessarily for simpler equipment.

**Process Inefficiencies:** In addition to the inefficiencies due to the limitations of computer data base and systems described above, current permit processing often requires manual data entry and processing due to the lack of automated computer programs and online tools, further contributing to the operational inefficiency of the permitting system.



## Challenges SCAQMD Faces in Eliminating the Backlog

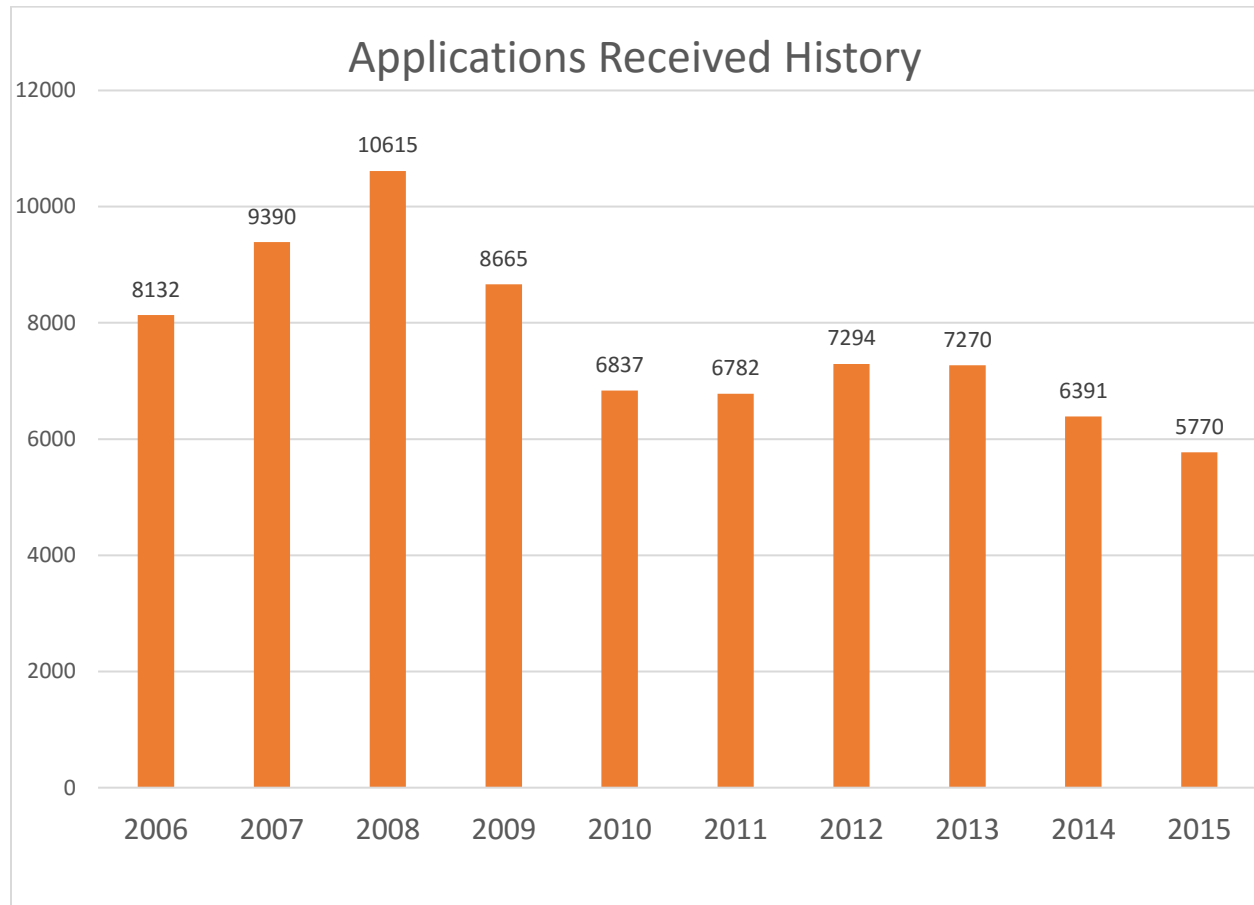
As established in the discussion under the “Anatomy of the Backlog” heading above, the backlog is estimated at 3,724 applications as of June 21, 2016. In fiscal year 2015-2016, SCAQMD received approximately 6,000 permit applications (low end of annually incoming permit applications range) and produced 7,700 permit actions<sup>5</sup> during the same period with 79 permit engineers. The estimated backlog figure above represents approximately 50 percent of the permit actions produced in fiscal year 2015-2016. In other words, in order to eliminate the backlog expeditiously (say in one year), overall permitting productivity in terms of final actions would need to increase by a similar percentage or approximately 50%. Similarly, if one seeks to eliminate the backlog in two years, permitting productivity in terms of final actions would need to increase by 25% per year for at least two consecutive years. This of course assumes that the incoming permit applications in future years remain the same at 6,000 as in prior fiscal year, which may not be a reasonable assumption since it reflects the lower end of the historically received permit applications. As shown in Figure 4, the annual number of applications received ranged between 5,770 and 10,615 per year from 2006 through 2015. However, this figure shows an overall downward trend over this period, so the last five years (2011 through 2015) are considered more representative of the rate at which applications are likely to be received in the future. The range for this five year period is 5,770 to 7,300. Projections in this Draft Action Plan assume applications will be received at a rate of 6,000 per year over the next two years.

Clearly, the much needed productivity rates above represent quite a substantial increase over current productivity rates and, hence, a significant challenge since there is no single measure that will allow us to achieve it while maintaining quality standards and providing a high level of customer service.

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<sup>5</sup> Final actions include issuing permits to operate and rejecting, cancelling, and denying applications but exclude issuing permits to construct.

**Figure 4**  
**Counts of Applications Received by Year**



## Action Plan

To achieve the significant production rate improvements described in previous section and eliminate the backlog necessitate major improvements in two fronts:

- Permit Processing (Production) capacity; and
- Permit Processing Efficiency (through streamlining and expediting permitting)

To accomplish the backlog reduction goal as expeditiously as possible, and meet the customer service and transparency improvement objectives in a sustainable manner, staff developed the following action plan consisting of a suite of immediate and longer-term action measures. These measures focus on increasing production capacity through improvements in permitting efficiency (permit streamlining and acceleration measures), staffing solutions, active management of permit processing, automation, and policy solutions.

## Permit Processing (Production) Capacity Improvement Measures

To improve permit processing capacity, it is essential that additional resources and/or improved utilization of existing resources are deployed and made available to process applications above and beyond current production rates. This can be accomplished through the combination of the following measures:

- **Active Management/Supervision**

More active and tighter management and supervision of subordinate staff will be relied upon to help improve permit production rates. Supervisors and managers will be called upon to provide production goals, direction, and feedback, while closely monitoring progress. This will include monitoring productivity of each engineer relative to the overall productivity of the team and providing training and coaching for any who are not meeting their potential. Production statistics will be monitored on weekly and monthly basis. Oversight will be provided at the ADEO and DEO level.

- **Maintaining Adequate Staff Resources**

Key to processing new permit applications as they are received as well as expeditiously eliminating the backlog is appropriate staffing. This work program must be performed by competent engineers with the appropriate knowledge, training, and abilities. Therefore, it is necessary to ensure that we maintain adequate engineering staffing to perform the required work in the desired timeframe. The prioritized list of staffing solutions follows:

- ✓ **Filling Vacancies**

As stated previously, chronic high vacancy rates in E&P (approximately 20%) at both the Air Quality Engineer and Senior Air Quality Engineer/Supervisory levels have contributed adversely to the growth of the backlog. While filling Air Quality Engineer vacancies will add to our capacity of evaluating additional permit applications, filling vacant Senior Air Quality Engineer positions is also important because Senior Engineers review engineers' work, provide direction, and train new engineers. Currently, high vacancy rate at the Senior/Supervisor Air Quality Engineer level has been identified as a bottleneck in finalizing the review and issuance of permits. Staff has already initiated this process and has recently hired six new engineers and will conduct another recruitment. It is important to note that, while filling entry-level engineer vacancies is a crucial activity that is occurring in the short term and must continue in the long term as new vacancies are created (*e.g.*, due to retirement), it should be viewed as an essential investment in the future but will not help reduce the inventory of open applications in the short term appreciably due to the long training required for an entry-level engineer to come up to speed with the necessary experience to tackle the intricacies of the permit evaluation process. Filling the vacant Senior Engineer positions, on the other hand, will pay immediate rewards in enhanced productivity.

- ✓ **Weekend Work**

As a means of expanding our permit production capacity, we could expand weekend work by engineers. Initially, opportunities to work weekend overtime will be provided to permit processing engineers on a voluntary basis. Depending and on level of interest towards voluntary overtime expressed, it may become necessary to institute mandatory overtime to

- achieve our backlog elimination goals. We intend to initiate the voluntary component of this program in October and the mandatory component, if necessary, shortly after. We will also review our expedited permitting program, which relies on voluntary overtime work, with an eye to enhancing the benefits that it provides to applicants.
- ✓ **Deploying Engineers from Other Departments**

It is quite clear, given the permit processing capacity improvements needed, to reduce the backlog as expeditiously as possible, additional staff resources will be needed for permit processing. To that end, staff will borrow staff with formal engineering training (preferably with prior permit processing experience) currently working in other departments at the SCAQMD, as well as Engineering and Permitting engineers currently assigned non-permitting duties, to help with the permit backlog reduction effort. This could be done on a full time, part time (e.g., 20 hours per week dedicated to their normal duties and 20 hours per week to permit processing), and/or overtime basis for permit processing. Deployment of these resources can be expected to commence within 45 days to allow for training and preparation of office space that includes purchasing and deployment of the necessary computer and phone infrastructure, as well as identification and availability of senior/supervisory support.
  - ✓ **Temporary Engineers**

If the above-described efforts to maximize the availability of engineers to process applications proves to be insufficient to achieve the necessary backlog reductions in the short term, we will also consider additional contingency measures including short-term (no more than six-month) use of engineering contractors to temporarily increase the engineering workforce. However, hiring temporary contract engineers has the significant disadvantage of imposing a similar training and supervision burden on our seasoned staff as does hiring new, full-time engineers without the long-term benefits realized from hiring permanent engineers. To reduce time needed for training, emphasis will be given to hiring retired SCAQMD engineers and Certified Permit Processing engineers. It will be necessary for temporary engineers to disclose their prior business associations so that they can be assigned applications that do not pose the potential for conflict of interest.
  - ✓ **Permitting Dugout**

Physically relocating teams of engineers on a temporary basis for targeted permitting efforts (“permitting dugout”) is another contingency measure that may be implemented, if necessary. The dugout approach is designed to minimize distractions to help the engineers focus on their evaluations. For example, the dugout would include limited access to shared phones rather than moving each engineer’s direct line to the dugout location. This may be an effective situation for staff that works solely on weekends so they have the support of other staff and supervisors in the same location. Implementation of this contingency measure will be considered in the event quarterly backlog reduction targets are missed by a wide margin.
  - ✓ **Resource Reallocation**

To ensure optimal balancing of workload with production needs, resource allocation among the various permitting teams in E&P will be periodically reviewed and redistributed as necessary.

✓ **Training**

Training will be employed as appropriate to ensure that permitting engineers are fully aware of and understand the latest guidance and policies, as well as the tools available to them.

## Permit Processing Efficiency Improvement Measures

While deploying additional staff resources to improve permit processing capacity as described above will undeniably help reduce the backlog, the main focus must be given to efficiency improvement measures that can provide much needed synergies to achieve that end. Improving permit processing efficiency ensures the least cost path in streamlining and expediting the permitting process, and reducing the backlog in a sustainable manner. These efforts will also enhance our ability to be more transparent. Internal ad-hoc teams (“Red Team,” “Blue Team,” etc.) comprised of Engineering and Permitting executive management, management, and staff and augmented as appropriate by the Chief Operating Officer, General Counsel staff, and management staff from other offices will be established to assist with the vigorous development and implementation of the many efficiency improvement measures described below. Oversight will be provided at the DEO and COO level with frequent reporting to and feedback from the Acting EO. Some of these efficiency measures are long-term projects that will not yield efficiency improvements until we are beyond the time horizon of this backlog reduction effort. However, they will be important contributors to maintaining appropriate permit turnaround times and preventing the growth of a new backlog.

- **Better Coordination between SCAQMD departments**

Some applications can be processed, and resulting permits issued, through the efforts of a single engineer and one reviewer (senior engineer or engineering supervisor), while others involve input from other departments at the SCAQMD, such as CEQA, Modeling, Source Testing, and Technology Advancement and sometimes input from other agencies. Improved coordination among various departments will go a long way in minimizing delays. To that end, options to improve interdepartmental communication will be explored and clear guidance to staff regarding proper methods to request inter-departmental assistance and procedures for responding to such requests, including prioritization and turnaround times will be established by an ad-hoc team, as described above. This measure is already being implemented.

- **Rely on Inspection Reports when Converting Permits to Construct to Permits to Operate**

The traditional approach to processing an application for new construction of a new source has included the following steps, among others:

- ✓ Preliminary review/completeness determination;
- ✓ Application evaluation to quantify emissions and determine compliance with applicable requirements;
- ✓ Issue permit to construct;
- ✓ Engineer visit to the facility to verify the source was constructed consistent with the application and permit;
- ✓ Review source test results to verify compliance with emissions limits; and
- ✓ Issue permit to operate.

The engineers’ site visits constitute a time-consuming step in the overall process. Therefore, we are now streamlining the process by having the engineers rely on inspection reports prepared by inspectors that routinely visit facilities to verify the source is as described rather than visiting the

facilities themselves in most cases (site visits by engineers remain appropriate in some of the most complex cases and for training purposes). We expect this to provide a significant benefit in reducing the overall inventory of open applications because 2,056 (28 %) of the 7,348-application inventory as of June 21, 2016 had permits to construct issued. Implementation of this measure has already commenced and is expected to continue for the duration of the backlog reduction effort.

- **Simplify Issuance of Permits - Reduce the Two-Step Permitting into a Single-Step Process**

We are actively exploring the opportunities to transition from a two-step permitting process (issuance of a Permit to Construct followed by issuance of a Permit to Operate once construction is complete and compliance demonstrated) to a single-step permitting process (issuance of a single permit to both construct and operate, with an inspector conducting compliance verification after construction is complete). While this simplification may not be appropriate for many of the complex permit application projects, it may provide significant permit streamlining opportunities for many of the less complex equipment and processes. The review of this streamlining effort is expected to be completed within six to nine months, although it is already being implemented in some cases.

- **Automating Permitting Process**

To reduce the backlog in a sustainable manner but also improve customer service and transparency, it is of paramount importance that SCAQMD heavily invests in efforts to automate permit processing to the extent feasible. There are a variety of automation projects with the potential to improve efficiency of the permitting process:

- ✓ **Develop Templates for Application Evaluations and Permits**

Permitting engineers widely use templates to improve consistency between permits for similar equipment while streamlining the processing and permit preparation process. More can be done to develop additional templates and centralize them so that they are available to all permit processing teams and are used consistently across the board, as well as kept current as applicable requirements and evaluation techniques evolve. Posting templates on the web will also help applicants. An ad-hoc team for this effort will be formed and staffed by members from each permitting team to identify potential template candidate processes and work on the development of such templates. The ad-hoc team for this effort will be formalized during the last quarter of 2016 and will continue for the duration of the backlog effort and beyond. However, the brainstorming effort to identify potential template candidates will commence immediately. In fact, development of such a template for boilers is already underway. Depending on the ideas generated through this initial brainstorming effort and ensuing demand for template development, deployment of the ad-hoc team may be accelerated.

- ✓ **Electronic Processing Tools**

The current Facility Permit software makes it possible for Permit Services staff to process some—but not all—applications for change of operator. Therefore, upgrading the Facility Permit software such that Permit Services staff rather than engineers can process all change of operator applications will free more of the engineers' time for tasks that require their technical expertise. An ad-hoc team comprised of E&P and IM managers and staff will be

formed immediately to work on this effort. Oversight will be provided at the ADEO and DEO level.

✓ **Electronic Permitting**

There are several automation projects that have the potential to greatly improve the permit application processing efficiency. These projects begin with transitioning from filing applications on paper to electronic filing. Initially, electronic filing is likely to be an option for limited types of equipment. Over time, the list of equipment eligible for electronic filing will grow and, eventually, electronic filing is likely to become mandatory for specified types of equipment. Electronic filing will enhance efficiency by reducing the time engineers spend on data entry and reducing the potential for data entry errors. Also, additional automation projects will develop tools to harvest the data from electronic filing and reduce the time engineers must spend on certain routine tasks that can be performed by these tools. We intend for this process to eventually lead to an electronic permitting system, although it may not be applicable to all types of equipment or all facilities initially. Developing the online capabilities described above is a very ambitious but necessary undertaking to streamline our permitting process. It is expected to take significant time and resources to complete and will be developed in multiple phases. While developing basic electronic forms and permit processing tools for simpler equipment permits and registrations is expected to be completed in a relatively short time frame of three to four quarters, the development of online tools for more complex equipment and processes will take considerably longer. An ad-hoc team comprised of E&P and IM managers and staff will be formed immediately to work on this effort. Oversight will be provided at the ADEO and DEO level.

✓ **Review Permitting Computer Systems and Automation at other Agencies**

The various automation efforts described above will be supported by review of similar efforts at other agencies. This approach will allow SCAQMD to benefit from the experiences of other agencies (replicating their successes and avoiding their missteps).

Bay Area Air Quality Management District (BAAQMD) has already invested a decade and approximately \$13.5 million in developing an online permitting tool for certain auto body shops, dry cleaning facilities and gasoline dispensing facilities (gas stations). This tool allows applicants to perform the following activities:

- Submit permit applications;
- Submit Data Update requests;
- Pay invoices for applications and permit renewals;
- Retrieve permit copies; and
- Designate three facility contacts (owner, operator, and billing contacts)

The three type of facilities covered by this online tool account for approximately 30% of BAAQMD's permit application activity. While these facilities only account for approximately 8% of the annual permit application activity in SCAQMD, the online tool is worth pursuing. Therefore, our Information Management staff are reviewing BAAQMD's online permitting tool to determine to what extent elements of it can be adapted to work with our permitting system. We will return to the Governing Board with a project description and budget to do so after the evaluation process is complete; the current estimate is that this effort will take five years at a cost of \$1 million per year.

- **Registration/Certification**

The Registration/Certification program provides a cost-effective and streamlined alternative to the conventional permitting process for certain off-the-shelf equipment, such as emergency internal combustion engines. We will actively work to identify additional types of off-the-shelf equipment appropriate for inclusion into the program. While this going to be an on-going effort, the process to identify candidate equipment categories is currently commencing.

- **Filing Program (Rule 222)**

Rule 222 provides yet another cost-effective and streamlined alternative to the conventional permitting process for certain equipment/processes with low emissions profiles by allowing facility owners to operate their equipment/processes by simply filing a registration form with the SCAQMD rather than obtaining a regular permit. The registration form comes with pre-assembled conditions, is extremely easy to complete and process and, very importantly, much less costly to the applicant. While this program is more conducive to smaller, less complex equipment with lower emission profiles, identifying additional candidate equipment for the program that can be handled through Rule 222 filing instead of traditional permitting not only will help improve customer service but also will go a long way in reducing the number of incoming permit applications to be processed, and thus freeing engineers' time to process other more complex permit applications. While this will be an on-going effort, the identification of equipment categories to be proposed for inclusion in the Rule 222 program will begin in the last quarter of 2016.

- **Improved Training**

Providing improved training to our staff is a key strategy that will pay dividends over the long run. The following summarizes our efforts to improve our internal training programs:

- ✓ **New Engineer Training**

It typically takes months and often years for newly hired engineers to realize their full permit processing potential. Therefore, providing appropriate training to new engineers and equipping them with the necessary knowledge and experience to navigate the intricacies of the permit evaluation process is of utmost importance and may help reduce the maturation process. Our training programs for newly hired engineers has consisted of a lengthy classroom process followed by on-the-job training provided by senior engineers. We are now transitioning to a training program more focused on the on-the-job aspect because it improves comprehension and retention.

- ✓ **General Engineer Training**

Appropriate training can help engineering staff become more efficient and effective. We will make efforts to identify and provide effective training that can help engineers make the best use of available tools while enhancing customer service. We will also explore opportunities for cross training to help keep engineers fresh.

- **Permit Processing Handbook**

The Permit Processing Handbook was released in 1989 and has not been updated since. Therefore, we will initiate the process of reviewing and updating it to ensure it is consistent with current rules and regulations, policies, permitting tools, etcetera. The Handbook will be a valuable resource for the engineers reviewing permit applications. The ad-hoc team for this project will include representatives from each of the permitting teams, as well as from other departments as appropriate to address the relevant issues. As part of our transparency



improvement efforts, once updated, we intend to post the handbook on our website. This work is expected to commence during the second quarter of 2017. However, depending on progress made in reducing the backlog and available resources this schedule may be adjusted.

- **Revisit Outdated Policies**

There are multiple policies developed over the years that need to be reevaluated in an effort to streamline permit processing while continuing to respect the letter and the spirit of the law. Rule 212 - Standards for Approving Permits and Issuing Public Notice described below is a prime example for such an improvement.

Rule 212 establishes several criteria by which applications can trigger public notice requirements. While SCAQMD staff is very much in support of the public's right to know what is happening in the community, there are certain cases in which the noticing process does not provide meaningful information and therefore the substantial delays and investments of time and finances it imposes on both the applicants and SCAQMD are not warranted. In particular, we currently require distribution of a public notice for any application that results in an increase in emissions within 1,000 feet of a school no matter how small the increase—there is no *de minimis* level of emissions increase below which no public notice is required. Therefore, we are investigating options for developing such a *de minimis* level such that if a project results in an increase in emissions that is below the established level in terms of both amount and health risk, noticing will not be required. Additionally, there are two types of situations in which noticing is required even though there is actually no increase in emissions or health risk whatsoever:

- ✓ Re-permitting a source that has been in constant use but lost its permit due to non-payment of annual operating fees. These are sources that have already been subject to engineering review, are only going through the permitting process due to prior non-payment of fees, and do not result in any impact on air quality or public health; from the perspective of the community such permitting activity may not be important.
- ✓ Re-permitting a source (permit to construct) that previously went through the public notice process simply due to the timing of a change of the operator. Specifically, if a public notice is distributed for a project and we issue (a) permit(s) to construct, then a new operator takes over the project before construction commences the new operator is required to submit (a) new application(s) for permit(s) to construct because change of operator is not possible for (a) source(s) that have not commenced construction. The public has already been informed of the emissions and health risk (if any). The costs and delays associated with the noticing process are not justified in cases where the notice would amount to informing the public that a project of which they were already informed is being taken over by a different operator.

We intend to establish an ad-hoc team to revisit the current guidance on these situations, including the underlying rule requirements and statutes, to determine to what extent they can be streamlined. This ad-hoc team will include members from General Counsel's office, Public Affairs, and the permitting teams, as well as from other departments as appropriate. Oversight will be provided at the DEO and COO level with frequent reporting to and feedback from the Acting EO. This ad-hoc team will commence its efforts in the fourth quarter of 2016 and continue for the duration of the permit backlog effort and beyond.

- **Revisiting Rules**

- ✓ **Rule 219** - Equipment Not Requiring a Written Permit Pursuant to Regulation II identifies equipment that is exempt from permit requirements. Therefore, identifying additional categories of equipment that have minimal emissions and risk potential and amending Rule 219 to include them will reduce the backlog by rendering certain applications unnecessary. Rule development efforts are currently in progress to evaluate many additional potential exemptions.
- ✓ **Rule 222** provides an expedited and low-cost alternative to permitting for smaller, simpler equipment and processes with a relatively low emissions profile. Identifying additional such equipment and including them into Rule 222 can provide much needed relief to permit processing by reducing the universe of sources subject to permitting.
- ✓ **Rule 1309** – Emission Reduction Credits and Short Term Credits, states that the “Executive Officer shall issue ERCs after rule adoption in yearly increments for the first 7 years and a permanent credit thereafter” (see Rule 1309(f)(1)(C)). The intent behind this provision was to increase the fungibility and liquidity of ERCs by allowing facilities to separate their near-term ERCs from the future years and, for example, sell the near-term portion for use by another party while retaining the future years portion for their own use. However, for a variety of reasons, there has actually been virtually no use of this feature and it causes the number of applications required for ERC transactions to grow by a factor of eight. This increase in applications results in a corresponding increase in application fees for the parties to these transactions and in work needed to be done by SCAQMD engineers. As such, amending this provision to give the applicant the choice between traditional ERCs or seven yearly increments and a subsequent permanent ERC will avoid both of these issues while retaining the intended flexibility.

The ad-hoc team that will be formed to review policies described above will also be tasked to review the underlying rule requirements and statutes to determine to what extent they can be streamlined. This ad-hoc team will include members from General Counsel’s office and the permitting teams, as well as from other departments as appropriate. Oversight will be provided at the DEO and COO level with frequent reporting to and feedback from the Acting EO. This ad-hoc team will commence its efforts in the 4<sup>th</sup> quarter of 2016 and continue for the duration of the permit backlog effort and beyond. However, the review of the limited number of rules listed above as an example is expected to be completed within three to six months, then they will be prioritized for rule amendments within the next one to three years.

- **Study Other Agencies**

There are a number of other agencies that have achieved significant strides in streamlining and expediting their permit processing. Therefore, it make sense to review and study the business processes and experiences of other permitting agencies to learn from their successes and failures so that we can incorporate the best ideas into our own processes and avoid approaches that have been demonstrated to be ineffectual. As a starting point, we will look to a couple of California’s other air quality districts (Bay Area Air Quality Management District, San Joaquin Valley Air Pollution Control District and the Texas Department of Environmental Quality. An ad-hoc team comprised of E&P managers and staff will be deployed for this effort in the 4<sup>th</sup> quarter of 2016 and is expected to complete its review by the 2<sup>nd</sup> quarter of 2017.

- **Missing Fees**

SCAQMD's current practice is to accept permit applications with insufficient application fees provided at least 85 % of the correct fee is included. This business process often results in engineers performing all of the work to process and issue the requested permit and the supervisor to perform the associated review only to be unable approve the permit due to missing fees. This then results in significant delays and consumption of disproportionate staff time while the engineer attempts to get the facility to submit the missing fees. Acting as collection agents is not an effective use of engineers' time that could be more appropriately used processing additional permit applications. Therefore, we are exploring options to eliminate this problem.
- **Additional Information**

Another problem routinely encountered by engineers when reviewing permit applications is that the applicant does not provide all of the necessary information even though the missing information was specifically requested in the supplemental application form. The applicants typically explain that they chose not to provide certain requested information because they did not think it was important. Negotiating with the applicant to obtain the missing information is time consuming for engineers and does not represent the best use of their time. As such, our intention is to revise the application forms to make it clearer that the requested information is necessary. This will include incorporating "fill-in-the-blanks style equipment descriptions in the application forms, which will help applicants understand that the requested information will actually be used. Alternatively, staff is considering issuing two sequential letters requesting the additional information needed by specific deadlines and if the information is not forthcoming consider rejecting the application.
- **Listening Session**

Staff will hold one or more listening session(s) to solicit input from the Permit Streamlining Task Force and other interested parties regarding this Draft Action Plan.

Figure 5 is a Gantt chart presenting the timeline for implementation of the various efficiency measures. Several items in this Gantt chart are presented as continuing through the fourth quarter of 2018 (*i.e.*, to the right edge of the chart). These are continuous/ongoing efforts that will persist into the future.

**Figure 5  
Implementation of Efficiency Measures**

**Permit Backlog Reduction Effort  
Efficiency Measures**



**Additional Customer Service and Transparency Improvement Measures**

While implementing the measures outlined above and reducing the permit backlog is the best strategy to improve customer service, there are a number of other measures described below that staff intends to implement to provide better customer service and improved transparency. The above-described listening session(s) will also solicit ideas regarding implementation of these measures.

- **Pre- and Post-Application Conferences between Applicant and Permit Engineer**

Holding pre-application conferences between the applicant and permit engineer prior to the submittal of an application will help the engineer gain familiarity with the project but will also familiarize the applicant with the permitting process as well as the type of information that will be needed for an expeditious evaluation of the application. Similarly a post-application and post-PC conference will help outline expectations for an expeditious issuance of a PO. Such conferences are already in use in some cases and expansion of their use will commence the fourth quarter of 2016.

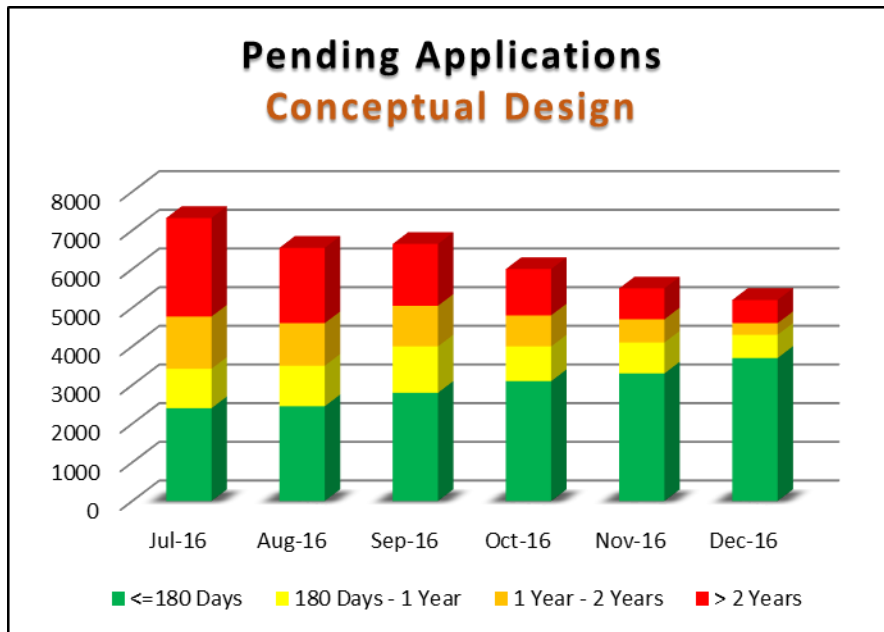
- **Online Tracking**

In addition to the efficiency-related automation projects described above, we intend to build an online tracking tool that applicants will be able to use to monitor the progress of their applications with substantially improved granularity relative to what is currently available. This will also include web posting of Title V and RECLAIM facility permits as they are issued. Work on developing this tool has already commenced and is expected to be completed within the 1<sup>st</sup> quarter of 2017.

- **Dashboard**

Staff has developed a simple color coded tool for the public that will communicate the aging status of pending applications (see Figure 6); this phase of the dashboard project should be “live” on our website within a month. We are also working to develop a dashboard for our website that will allow applicants to quickly and easily identify how their applications are progressing through the permitting process relative to the target processing times. The current thinking is that each open application will receive a color code identifying it is currently on time (green), a little behind schedule (yellow), or significantly behind schedule (red). Developing this application-level dashboard is a far more complex task than is developing the visual representation of the age distribution pending applications described above and shown in concept in Figure 6. As such, it will be developed in phases, starting with updates to our application tracking system to enable it to capture the necessary data for this dashboard to present. Then permitting staff will need to be trained and that data populated. Finally, the dashboard itself will need to be designed, built (programmed), and deployed. Staff is targeting the end of the second quarter of 2017 for dashboard deployment.

**Figure 6**  
**Graphical Representation of the Age Distribution of Pending Applications**



- Evaluation and Permit Templates**  
 Staff is also exploring the feasibility of making the previously discussed evaluation and permit templates available on our website in the hopes that doing so will help applicants better prepare complete, approvable applications.
- Permit Processing Handbook**  
 Once the Permit Processing Handbook is updated as described above, staff intends to make it available on SCAQMD's website. Similar to the permit templates, it is expected that the availability of the document on the public domain will help future applicants in better preparing complete, approvable applications, which in turn will help expedite the permit evaluation and issuance of permits.

## Implementation Scenarios

Eliminating the backlog as expeditiously as possible, as described above, will require significant resource commitments (human and capital) to improve permit production capacity and permit processing efficiency. The following discussion analyzes the implementation of this Action Plan under two different time scenarios including estimation of costs required to eliminate the backlog. The first scenario explores the opportunity to eliminate the backlog in two years, while the second scenario evaluates the prospect of eliminating the backlog in 15 months. Although difficult to quantify, both scenarios assume an across-the-board efficiency improvement in permit processing of five percent in the first year and eight percent in the second year while enhanced management and supervision will provide an additional boost of seven percent. Furthermore, both scenarios rely on our existing permitting resources working beyond the 40-hour week schedule and mobilizing and temporarily drafting staff with engineering background residing in other departments in to the backlog reduction effort. Relying on internal staff to

reduce the backlog has by far the lowest capital expenditure. However, to further expedite the backlog reduction, the second scenario also explores the possibility of hiring contract engineers on a temporary basis.

### Data and Assumptions Used in these Analyses

- SCAQMD will continue to receive approximately 6,000 permit applications per year.
- Seventy-nine engineers produced 7,700 permits in Fiscal Year 2015-16, which translates to a production rate of approximately 100 permits per engineer per year.
- The various efficiency measures in this Action Plan will result in an approximately five percent increase in productivity by current permit processing engineers in the first year and eight percent in the second year because these measures will take time to develop and implement and thus will phase in over time. This is equivalent to 385 additional permits in the first year and 616 additional permits per year in subsequent years, or approximately four additional FTE-equivalent permit processing engineers in the first year and six additional FTE-equivalent permit processing engineers in subsequent years.
- The various management/supervision measures in this Action Plan will result in an approximately 7 percent increase in productivity by current permit processing engineers. This is equivalent to 540 additional permits per year or approximately five additional FTE-equivalent permit processing engineers.
- The current costs of engineers are summarized in the following table:

Position	Fully Burdened Hourly Rate	Overtime Hourly Rate	Annual Salary and Benefits
Assistant Air Quality Engineer	\$90.52	\$80.61	\$125,784
Air Quality Engineer I	\$97.39	\$88.89	\$138,260
Air Quality Engineer II*	\$101.40	\$93.71	\$145,522
Senior Air Quality Engineer	\$108.56	\$102.32	\$158,490
Engineering Supervisor (AQACS)	\$116.41	\$111.78	\$172,740

\* The Air Quality Engineer II regular rate is assumed to reflect the cost of hiring temporary engineers.

- Newly hired engineers perform at the level of one-third of a seasoned engineer in their first year (Assistant Air Quality Engineer) and two-thirds of a seasoned engineer in their second year (Air Quality Engineer I).
- Temporary engineers have a range of experience levels and perform at the level of one-half of a seasoned engineer.
- It is assumed that ten engineers from other divisions will be identified to contribute to the backlog reduction effort one day per week. Because of the extensive training and/or re-training that will be required, they are further assumed to perform at half the level of permit processing Air Quality Engineers II in the first year they are “borrowed” to help with this effort and three-quarters the level of permit processing Air Quality Engineers II in the second year. Furthermore, their time contributing to the backlog reduction effort is assumed to be performed during overtime.
- The overall application inventory (working inventory plus backlog) consists of approximately 7,350 applications as of June 21, 2016 (about 2,000 of which had permits to construct issued and were pending permits to operate).

- Since permits to construct serve as temporary permits to operate, we are focusing on the other approximately 5,350 pending applications in the overall inventory with primary emphasis on the backlog of the older 3,724 applications.
- Conversion of permits to construct to permits to operate will not be ignored; inspectors' inspection reports will be utilized to verify installation of equipment as described in permits to construct.
- At 100 permits per engineer per year, 38 full-time employee (FTE)-equivalent engineers<sup>6</sup> will be needed to process the 3,724-application backlog in one year. Eight FTE-equivalent Senior Engineers and 3 FTE-equivalent Engineering Supervisors will be needed to review and approve the work of these engineers. These FTE-equivalent staffing estimates are above and beyond current staffing levels.
- Alternatively, to process the 3,724-application backlog in two years, nineteen FTE-equivalent engineers, four FTE-equivalent Senior Engineers and 1.5 FTE-equivalent Engineering Supervisors will be needed each year to supplement current staffing levels. Note that these are average FTE equivalents for each of the two years and the actual implementation does not need to be evenly distributed over the two years. For example, three newly hired engineers or temporary engineers would yield 1 FTE-equivalent engineers in the first year and 2 FTE-equivalent engineers in the second year for a combined contribution of 3 FTE equivalent engineers to the overall need for 38 FTE equivalent engineers.
- Line item costs are rounded to the nearest hundred thousand dollars, but totals are calculated from unrounded figures.
- These scenarios reflect staffing costs over the next one to two years. Additional funding will be required for items such as automation projects, which are expected to generate cost savings over the long term. The extent of such additional funding is not quantified at this time.

### Scenario I:

Scenario I seeks to eliminate the backlog expeditiously relying on better utilization of existing staff in an effort to minimize short- and long-term costs, while maintaining high quality standards. It relies on a blend of efficiency measures, enhanced management and supervision, and modest use of overtime. As described below, under this scenario the backlog is eliminated in eight quarters.

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<sup>6</sup> Specifying the need for a certain number of "FTE-equivalent engineers" indicates that some combination of measures resulting in an increase in productivity equivalent to the productivity achieved by that same number of fully trained and seasoned engineers; it does not mean that that number of additional engineers is required. For example, both of the Scenarios presented herein includes eight FTE-equivalent engineers from "Efficiency and Enhanced Management/Supervision" (*i.e.*, increased productivity from existing staff resources).



- Year 1

Measure	FTE Equivalents	Cost
Efficiency measures	4 Engineers	\$0
Enhanced Management/Supervision measures	5 Engineers	\$0
Overtime (10 hours/week, every other month)	8 Engineers 1.875 Senior Engineers 0.875 Engineering Supervisors	\$1.6 million \$0.4 million \$0.2 million
Six newly-hired engineers*	2 Engineers	\$0
<b>Totals</b>	<b>19 Engineers</b> <b>1.875 Senior Engineers</b> <b>0.875 Engineering Supervisors</b>	<b>\$2.2 million</b>

\* These engineers are already in the budget and were hired effective August 2, 2016, so they do not result in any additional costs.

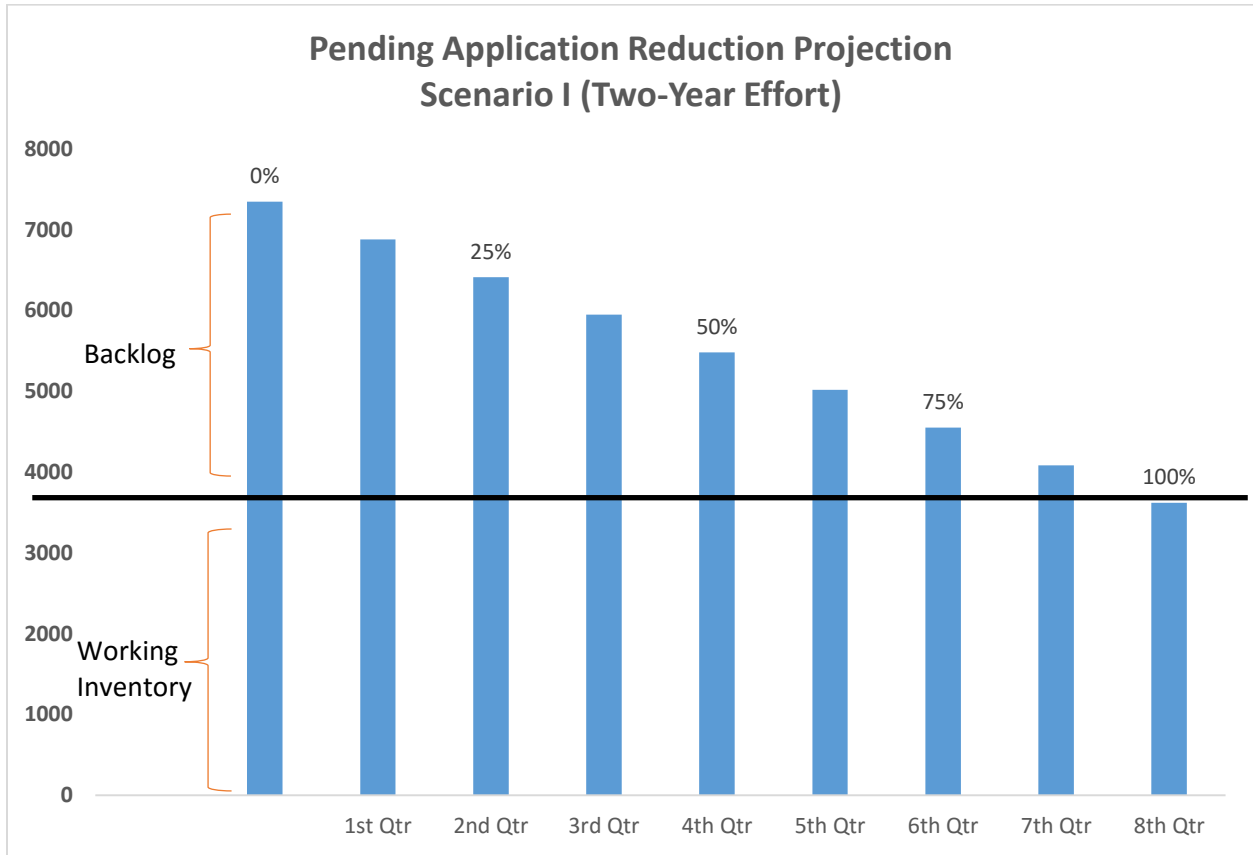
- Year 2

Measure	FTE Equivalents	Cost/Year
Efficiency measures	6 Engineers	\$0
Enhanced Management/Supervision measures	5 Engineers	\$0
Mandatory Overtime (10 hours/week, every other month)	8 Engineers 1.875 Senior Engineers 0.875 Engineering Supervisors	\$1.6 million \$0.4 million \$0.2 million
Six newly-hired engineers*	4 Engineers	\$0
<b>Totals</b>	<b>23 Engineers</b> <b>1.875 Senior Engineers</b> <b>0.875 Engineering Supervisors</b>	<b>\$2.2 million</b>

\* These engineers are already in the budget and were hired effective August 2, 2016, so they do not result in any additional costs.

Over the course of two years this approach yields 42 FTE-equivalent engineers, 3.75 FTE-equivalent senior engineers, and 1.75 FTE-equivalent engineering supervisors at a cost of \$4.4 million. As such, this approach would process the 3,724-application backlog in two years. Inter-divisional use of engineers is not required for this scenario as modest use of overtime for experienced permit processing engineers is sufficient in this scenario and more effective than part time use of engineers from other departments, particularly in consideration of the logistical and training issues involved. Note that this scenario results in an FTE-equivalent engineers estimate that is slightly more than the anticipated need (but not of senior engineers or engineering supervisors) and provides a cushion for a potential increase (up to 6%) in the incoming permit applications. Overall this scenario, as depicted in Figure 7, seeks to eliminate the backlog by achieving a quarterly 12.5 % pending application reduction target over eight consecutive quarters (actual reductions may be non-linear with some quarters achieving reductions above 12.5 % and others below). In the event the annual average in-flow of permit applications is significantly higher than the 6,000 permit applications assumed in this scenario, additional resources would be required to prevent delays to the schedule.

**Figure 7**  
**Scenario I**



**Scenario II:**

Scenario II seeks to eliminate the backlog quicker than Scenario I (15 months). It relies on the efficiency measures, enhanced management and supervision, staffing and overtime assumed in Scenario I, and, in addition, the hiring of new engineers (beyond the six hired in August 2016), senior engineers and engineering supervisors, as well as a large number of temporary engineers.

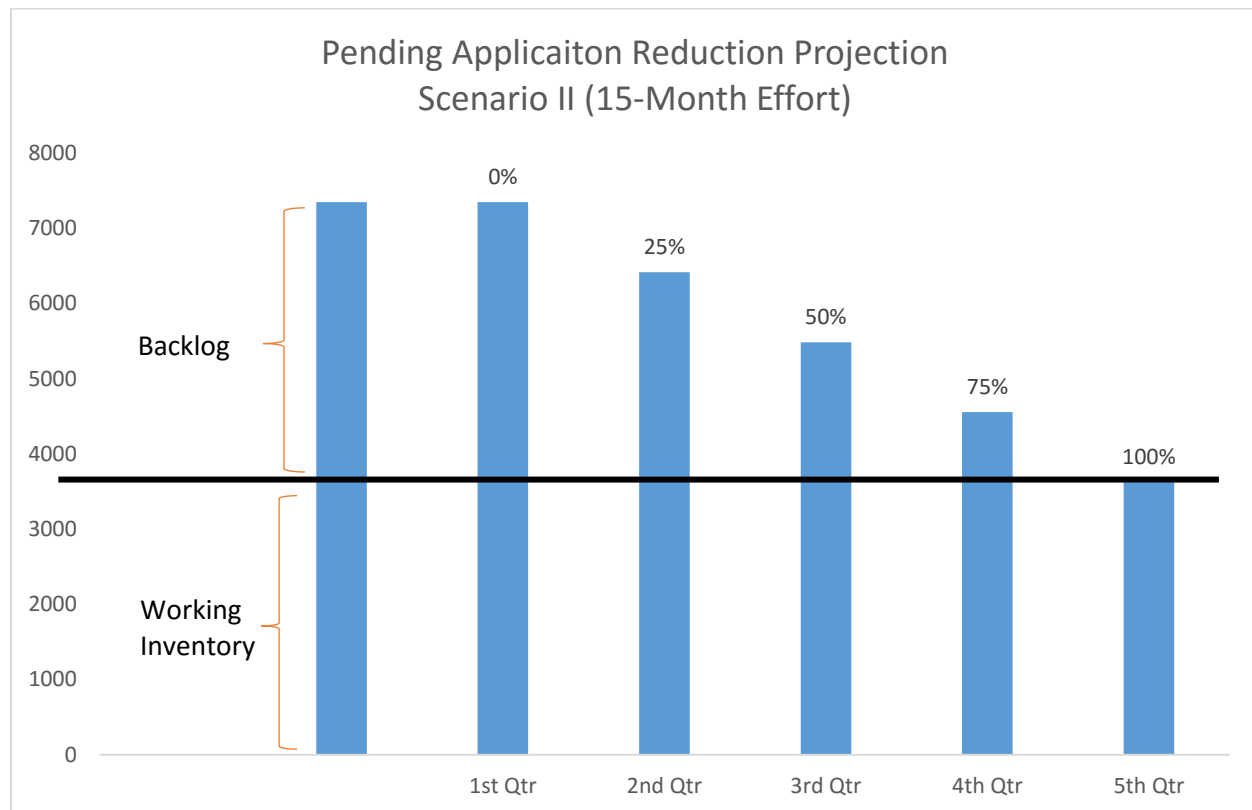
- Year 1

Measure	FTE Equivalents	Cost/Year
Efficiency measures	4 Engineers	\$0
Enhanced Management/Supervision measures	5 Engineers	\$0
Overtime (every other month)	8 Engineers	\$1.6 million
• Engineers: 10 hours/week	2.3 Senior Engineers	\$0.5 million
• Seniors & Supervisors: 12.5 hours/week	1.1 Engineering Supervisors	\$0.3 million
Six newly-hired engineers*	2 Engineers	\$0
Twelve newly-hired engineers	4 Engineers	\$1.5 million
Six newly-hired senior engineers	6 Senior Engineers	\$1.0 million
Two newly-hired engineering supervisors	2 Engineering Supervisors	\$0.3 million
Use of 10 Inter-division engineers	1.25 Engineers	\$0.5 million
Thirty temporary engineers	15 Engineers	\$6.3 million
<b>Totals</b>	<b>38.25 Engineers</b> <b>7.875 Senior Engineers</b> <b>2.875 Engineering Supervisors</b>	<b>\$11.9 million</b>

\* These engineers are already in the budget and were hired effective August 2, 2016, so they do not result in any additional costs.

Over the course of a year this approach would yield 38.25 FTE-equivalent engineers, 1.875 FTE-equivalent senior engineers, and 0.875 FTE-equivalent engineering supervisors at a cost of \$11.9 million. As such, this approach would process the 3,724-application backlog in 15 months at approximately 270% of the cost of doing so in two years. Overall, this scenario, as depicted in Figure 8, seeks to eliminate the backlog by achieving a quarterly 25% pending application reduction target over four consecutive quarters. However, this Scenario relies on hiring a large number of temporary engineers, as well as full time engineers, senior engineers, and engineering supervisors—a process that would take several months after it is approved by the Governing Board. As such, Scenario II would be expected to eliminate the backlog by April 2018. This scenario would require that senior engineers and engineering supervisors to train and supervise an additional 30 temporary engineers and 12 newly hired engineers. As such, more mandatory overtime is required on the part of the senior engineers and engineering supervisors than is needed from engineers under this scenario. Also, similar to Scenario I, in the event the annual average in-flow of permit applications is significantly higher than the 6,000 permit applications assumed in this scenario, additional resources would be required to prevent delays to the schedule.

**Figure 8**  
**Scenario II**



Depending on the resources deployed, both scenarios estimate that through a concentrated and intensive effort the backlog can be eliminated in approximately one-and-a-quarter to two years. The analysis also indicates that the efficacy of the efficiency improvement measures play a big role in determining the ultimate time and resources needed to eliminate the backlog. However, it is also important to be cognizant of certain challenges and vulnerabilities associated with some of the assumptions considered. All scenarios rely on the extensive use of overtime for the duration of the scenarios as a key strategy in eliminating the backlog. It is also assumed that productivity is maintained for the duration of the scenarios. That is, fatigue resulting from long-term use of overtime is assumed not to adversely impact productivity, an assumption supported by limiting the use of mandatory overtime to every other month. Finally, the hiring of additional full-time staff called for in these scenarios has the potential to temporarily bring Engineering and Permitting staffing above the level consistent with an eight percent vacancy rate. However, this increased staffing level would be self-correcting within a short time (one to two years) through attrition. There are currently four Air Quality Engineers, two Senior Engineers, and six Engineering Supervisors in Engineering and Permitting with 30 years or more of service and additional employees in each of those classifications between 25 and 30 years of service. As a result, the retirement rate is expected to remain high for several years. A co-benefit of this short-term overlap of staffing by newly hired engineers and soon-to-be-retired engineers is that it will enable the newly hired engineers to benefit from the knowledge and experience of the most experienced engineers before those engineers retire. It should also be noted that the cost estimates for either scenario above do not include the costs of developing the various online tools for



## Conclusions

Staff developed this Draft Action Plan to address the permit backlog SCAQMD has been experiencing, while improving customer service, issuing permits in a timely manner, enhancing transparency, and keeping the environment whole. This Action Plan includes a suite of aggressive but realistic immediate action and longer term measures that seek to improve permit production capacity and permit processing efficiency. Improved utilization of staff resources, active management of permit processing, automation and permit streamlining, policy solutions and training are among the strategies included in the Action Plan.

Depending on the resources deployed, the Draft Action Plan estimates that the backlog, which currently stands at 50 percent of the pending applications, can be realistically eliminated within a time frame of 15 months to two years. However, the cost of implementing the measures needed to eliminate the backlog in 15 months (\$11.9 million) is nearly three times the cost of the measures to do so in two years (\$4.4 million).

In an effort to expeditiously reduce the permit backlog, staff intends to proceed with the execution of this Draft Action Plan immediately and aggressively implement all of its elements. Staff has already commenced implementation of certain immediate action measures. Initial results from the first two months (July, August) of implementation are encouraging, yielding a 14 percent reduction in the “open permit applications” inventory.

Furthermore, staff will be providing the Stationary Source Committee with quarterly status reports on progress made. This may include recommending mid-course corrections, depending on actual progress compared to the projections included in this Action Plan.