AB 617 Community Air Protection Program
Steering Committee Meeting Agenda
ECRMC Community Education Center
3451 Dogwood Rd.
El Centro, CA 92243

MEETING AGENDA

Wednesday, July 10, 2019

5:30 p.m. – 7:30 p.m.

Facilitator: Amy Ramos of Harder Co.

Chair of Meeting: Luis Olmedo (Alternate: Christian Torres)

WELCOME

1. Roll Call/Opening Remarks by CSC Members — **Co-Chairs**

2. **PUBLIC COMMENT PERIOD**

3. **APPROVAL OF MINUTES:** — **Co-Chairs**
   June 12, 2019 Community Steering Committee Meeting
   (Attachment: *June 12, 2019 Minutes*)

4. **PRESENTATIONS**
   - Update on Draft Community Air Monitoring Plan and Draft Community Emissions Reduction Program — **Ramboll**
   - Dylos Monitor Training Introduction — **CCV**
   - Indoor Air Filtration Projects for schools in Corridor — **IQ Air**

5. **ACTION ITEM(S):**
   - CSC to take action on Early Reduction Project – CUSD Parking Lot Paving Project
     (Attachment: CUSD Parking Lot Paving Project Fact Sheet)
     Staff recommends for CSC to approve this emissions reduction project as an Early Reduction Project for the Community Emissions Reduction Program.

   - Additional CSC Meeting in July or August 2019
     Staff recommends for CSC to have an additional meeting in July or August 2019 in order to meet deadline of submitting the Community Emissions Reduction Program for the Community Corridor to CARB by October 1, 2019.

6. **AGENCY UPDATES** — **ICAPCD & CCV**

7. **AGENDA TOPICS FOR NEXT MEETING** — **Co-Chairs**

8. **CLOSING REMARKS/ADJOURNMENT**

Minutes

June 12, 2019

AB 617 Community Air protection Program
Minutes of the Steering Committee Meeting
ECRMC Community Education Center
El Centro, CA

Co-chairs: Matt Dessert; Luis Olmedo

Facilitator: Amy Ramos

I. Attendance:

Matt Dessert, Air Pollution Control District; **Luis Olmedo,** Comite Civico del Valle; **Mersedes Martinez,** Community Corridor; **Diahna Garcia Ruiz,** Community Corridor; **Rene Felix,** Calexico Corridor; **Mireya Diaz,** Community Corridor; **Kristian Salgado,** Community Corridor; **Chris Gomez Wong,** Community Corridor; **Blake Plourd,** Community Corridor; **Sergio Cabañas,** Community Corridor; **Mark Baza,** Community Corridor, **Aide Fulton,** Community Corridor; **Mary Salazar,** Community Corridor; **Irene Garcia,** Community Corridor; **John Hernandez,** Community Corridor; **Jose Celaya,** Community Corridor.

Alternate: Bob Fischer, Rosa Guerrero, Sandra Mendivil, Christian Torres, Chris Gomez Wong, Michael Moore,

II. Welcome and Opening Remarks from the Steering Committee Members

Amy Ramos welcomed everyone in attendance. She thanked the people from the public and said they value their input and that it is critical for them to have a voice at these meetings. She also informed that here were some Public forms found at the registration table and if there were any comments that they would like to make they could do so through these forms.

Matt Dessert said he would be the chairman for this meeting and welcomed everyone again. He also took this opportunity to remind them that for any process regarding the per diem agreed in the bylaws, they could get in contact with **Gil Rebollar** from the Air Pollution Control District. He also informed that they have a new designated main member put into their roster as he introduced **Rene Felix** as this primary sit member, and he added that they also have **Christian Torres** as a new designated alternate member for **Luis Olmedo**, as well as **Chris Gomez Wong** as a new designated alternate for **Kristian Salgado.**

Luis Olmedo said he would like to welcome everyone and he said he hoped this would be a productive meeting to both the committee as well as the audience.

Blake Plourd asked how the members of the committee are getting off the committee and being reappointed.

Matt Dessert explained that as co-chairs, **Luis Olmedo** and he had come to an agreement as to who would form a part of this committee. He also informed that some of these members had dropped out of participation due to missing attendance so they had agreed on bringing these new member and alternate to the committee as they consider them a very close fit to the members who had left. He added there would be other changes regarding this matter since there are other members who have not been participating, and that they would be making the pertinent announcements as they move forward into the future.

Mersedes Martinez mentioned there would be about 7 medicinal cannabis businesses opening up soon and that within their building plans they are including planting trees in order to mitigate pollution. She said she would like to know if there is anything that can be done through this committee to make this mandatory for every business building new facilities.

Matt Dessert he did not know how far they can go through AB 617 as far as setting policy within the city or other jurisdictions, but that they are looking at policies and administrative tools to make changes. He added he is aware that a tree program has been mentioned and recognized many times by the audience as well as the steering committee and that is something that he believes will come to fruition very shortly as they move forward and get started with these programs.

Sergio Cabañas said he appreciates the effort made to replace those members who were missing attendance to these meetings in order to promote the participation needed in order to be able to make the wisest decisions regarding the projects within this program.

III. Public Comment Period

Ray Askins suggested placing air sensors on the intersection of Second Street and Cesar Chavez Ave as well as on Second Street near a restaurant and next to the airport as these are two important locations that should be monitored for pollution and he was disappointed there were not included on the list.

Amy Ramos reminded everyone to feel free to submit a public comment form in order to address their questions, comments or concerns as they move along.

IV. Approval of Minutes from Prior Meetings

Matt Dessert stated that the minutes from prior meetings had been sent to them and indicated that at this time he was looking from a motion to approve and take a vote on approving minutes from the May 8th and May 22nd meetings.

John Hernandez made a motion to approve the minutes for both dates. Sergio Cabañas seconded the motion. After taking a vote, the minutes for May 8th and May 22nd were approved unanimously.

V. Presentations / Questions and Answers

Community Air Monitoring Plan Update; Emily, Ramboll

John Hernandez asked if the Clarity Node and Purple Air sensors have the capacity to measure volatile organic compounds as well as PM.

Emily indicated that the Purple Air monitors do not, but the Clarity Node sensors have the capacity to measure total volatile organic compounds as well as nitrous oxides.

An Attendee asked if they were set on this *Dylos*.

Emily responded that even though they are not set on these types of monitors, if they wanted to consider other sensors they would need a good reason why because they do gain a lot with the expertise that CCV has on these devices and the success they have had operating a network that has a high time rate and transfers the date well. She added that going with a different sensor would mean starting over.

An Attendee asked if it was possible to mix sensors in order to monitor other pollutant emissions and be able to obtain new data.

Matt Dessert mentioned they had had talks and other presentations on different types of monitors and they are considering adding a minimum of two toxic monitors in and around the New River in Calexico since that community has requested that for many years.

Luis Olmedo added that as far as measuring PM 10 and PM 2.5 the Dylos are ahead of the game when it comes to implementation. However, he mentioned this program is looking at toxic criteria and it is going to require regulatory monitors for this matter and there are regulatory instruments that are going to be implemented and operated by the Air Pollution Control District.

Emily said different kinds of monitoring were included ahead in her presentation and carried on with it.

Thomas Brinkerhoff from APCD said that once they submit their final plan to the state, they can expand upon this as the committee sees what it has worked and what needs to be improved upon.

Rene Félix mentioned that it is his understanding that one of their responsibilities is to decide how to do the monitoring according to the pollutant emissions in each area being monitored. He said he thinks they should have a wide range of equipment and methodology for this purpose. He added that in some areas VOCs, combustion gases and hydrogen sulfides should be measured in addition to just particulate matter.

Emily said the concerns about hydrogen sulfide and VOCs could be addressed when they talk about the different types of monitors they could add.

An Attendee asked how much of a setback they would have by adding new types to monitors to the air monitoring plan.

Emily said CCV could probably elaborate more on that question, but that it would have to do with how the data gets processed.

Christian from CCV explained that if they choose a different sensor they would have to contract all the work out and hope that they have the entire infrastructure in place. He added that they already have their local data infrastructure in place to start forwarding that data for AQ view, which is what they have to do with all the AB 617 monitors. He also mentioned they have the public data displays, which is the website for IVAN and they have a bubble application for air quality notifications for free under development to lounge.

An Attendee asked if those sensors are worth the money they are going to be investing on them and if the sensors that are already in place are the best and most cost effective sensors available on the market in order for them to be a continuation of the work that has already been done for the benefit of the communities in this corridor.

Luis Olmedo from CCV mentioned they have been working with sensor technologies since 2003 working with the American Lung Association, but what they lacked back then was scientific validation. However, he said that in the last six years they were able to bring in the State Department of Public Health and a technical advisory committee, which included the local Air District, the Air Resources Board, the University of Washington, UCLA, as well as some of the tribal consultants that were working in the local nearby tribes thus having monitoring experts and scientists working on this. He added that much of the model that now governs AB 617 was taken from Imperial, which puts it in a very strong position at this time.

Matt Dessert mentioned that the educational component to this program was a key and that there are other projects that form a part of this program that will help not only reduce emissions, but also avoid exposure or to reduce the amount of exposure time to pollutants.

VI. Action Items

CSC to take action on location of community monitors; Co-chairs / CCV

CSC took action on location of community monitors through voting.

Mark Baza mentioned one of his priority locations would be Second Street and Cesar Chavez because that is going to be the primary access to and from Mexico and that is going to add traffic to the already existing traffic on Second Street.

John Hernandez said he would like to advocate for the east side of El Centro somewhere close by Washington Elementary School because they have about half a dozen schools around that area.

Luis Olmedo said he had noticed a suggested site listed as El Centro Water Plant, but it is really a Sewer Plant and not a Water Plant.

Amy Ramos asked everyone to make sure their names were on their ballots and said they would compile their votes and that they would be receiving a link to call to action where you want these monitors. She also said they would have a booth at their next meeting where they would get to cast their vote for the last time and that is what they will use to inform the community monitoring plan. She added that the co-chairs will not see their names attached to their data as they will only show the aggregate values.

VII. Agency Updates

Matt Dessert informed that the Air Pollution Control District is still meeting weekly to address their activities within the AB 617 Program. He also mentioned they had been communicating with the Public Health Department and the Agricultural Commissioner's office to address pesticide issues. He mentioned they have been working on putting their budget together and that they would bring that back with a lot more detail ideally at the next meeting. He said they were also going to present a parking lot paving project at the Calexico High School. He also said they were working on their service agreement with other service providers as well as working on their monitoring plan that needs to be submitted to the California Air Resources Board.

Luis Olmedo encourage everyone to get in contact with Comite Civico or the Air District to raise any concerns, questions or ideas as they discuss and take everything into consideration and bring it back to the table. He also mentioned they are trying to make sure that the AB 617 Program has allocation of funding this year again.

Thomas Brinkerhoff mentioned there were going to be two public workshops held on June 19th. He said each session would be over two hours the first one being at two o'clock and the second one at 5:30. He added they would have 11 tables / booths on various topics related to AB 617. He said it was going to be a world café type of setup and he extended an invitation to all the members of the committee as well as members of the public to attend. He finished saying that if they had any questions they could contact CCV and he hoped to see everyone next Wednesday at El Centro Regional Medical Center at the Imperial Valley Mall.

VIII. Agenda Topics for Next Meeting

Matt Dessert said next meeting is scheduled for July 10th. He said he was optimistic to address some early emissions reduction projects, an informational item on the budget to present, as well better answers to the questions they receive all the time.

Thomas Brinkerhoff from APCD said that based on all the input they had received as far as the locations for the community monitors as well as on the information they have given on the technology they have been pursuing to implement, they are going to have an updated draft on the monitoring plan in order to finalize it in July to be presented to the state and revisit it in the future when the time comes as this committee sees fit.

IX. Closing Remarks /Adjournment

Matt Dessert thanked everyone for their attendance and participation.

Luis Olmedo said he was happy to see that the members of this committee are asking very important questions, and he encourage everyone to keep asking these difficult questions as they help them identify areas that are being missed. He also thanked the members of the audience for participating as well.

Meeting Adjourned.

Programa Comunitario de Protección Atmosférica Bajo el Auspicio del Proyecto de Ley AB 617
Minuta de la Reunión del Comité Directivo
Centro Comunitario de Educación OCR
El Centro, California
12 de Junio de 2019

Co-presidentes: Matt Dessert; Luis Olmedo

Facilitador: Amy Ramos

I. Asistencia:

Matt Dessert, Distrito de Control de Contaminación Atmosférica; **Luis Olmedo,** Comité Cívico del Valle; **Mersedes Martinez,** Corredor Comunitario; **Diahna Garcia Ruiz,** Corredor Comunitario; **Bob Fisher,** suplente; **Rosa Guerrero,** Corredor Comunitario; **Rene Félix,** Corredor de Calexico; **Mireya Diaz,** Corredor Comunitario; **Kristian Salgado,** Corredor Comunitario; **Blake Plourd,** Corredor Comunitario; **Sergio Cabañas,** Corredor Comunitario; **Michael More,** suplente; **Mark Baza,** Corredor Comunitario, **Aidé Fulton,** Corredor Comunitario; **Mary Salazar,** Corredor Comunitario; **Irene Garcia,** Corredor Comunitario; **John Hernández,** Corredor Comunitario; **José Celaya,** Corredor Comunitario

Suplentes: Bob Fischer, Rosa Guerrero, Sandra Mendivil, Christian Torres, Chris Gómez Wong, Michael Moore

II. Bienvenida y Comentarios Iniciales por parte de Integrantes del Comité

Amy Ramos dio la bienvenida a todos los asistentes. Agradeció a las personas del público en general y dijo que valoraban su participación y que era de vital importancia que tuvieran voz en estas reuniones. También informó que contaban con algunos formatos públicos en la mesa de registro a través de los cuales podrían si así lo deseaban, expresar sus inquietudes, preguntas y/o comentarios.

Matt Dessert dijo que él precedería esta reunión y le dio la bienvenida a todos los presentes de nuevo. También aprovechó esta oportunidad para recordarles que cualquier trámite pendiente para recibir su per diem de acuerdo a lo acordado en los estatutos, se podrían poder en contacto con **Gil Rebollar** del Distrito de control de la Contaminación Atmosférica. También informó que cuentan con un nuevo integrante principal como parte del comité mientras les presentaba a **Rene Félix** como este nuevo integrante. Por otro lado añadió que **Christian Torres** había sido asignado como suplente de **Luis Olmedo**, así como **Chris Gómez Wong** como suplente de **Kristian Salgado.**

Luis Olmedo dijo les dio la bienvenida a todos y dijo que esperaba que esta fuera una reunión productiva tanto para el comité, como para la audiencia en general.

Blake Plourd preguntó cómo había sido que se hubieran salido del comité algunos integrantes y cuál había sido el proceso para reasignar a otros.

Matt Dessert explicó que como co-presidentes tanto como, **Luis Olmedo** como el mismo habían llegado a un acuerdo en cuanto a quien formaría parte de este comité. También informó que algunos de los integrantes ya no eran parte del comité debido a su falta de participación y/o inasistencias por lo que decidieron integrar a estos nuevos miembros y suplentes como parte del comité ya que consideraba que cumplían con el perfil de los integrantes que se salieron. Añadió que habría otros cambios con respecto a este tema ya que había algunos otros integrantes que tampoco han estado participando pero que harían los anuncios pertinentes en la medida en que se avanzara en este tema.

Mersedes Martinez mencionó que pronto habría alrededor de 7 negocios de venta de marihuana medicinal y que dentro de sus planes de construcción se habían incluido la plantación de árboles para mitigar la contaminación. Dijo

que le gustaría saber si existe algo que se pudiera a través de este comité para que esto fuera obligatorio para cualquier nueva empresa con planes de construir nuevos inmuebles

Matt Dessert dijo no saber hasta donde podrian llegar a través de AB 617 en cuanto a políticas en el municipio o dentro de otras jurisdicciones se refiere pero que si están revisando tanto políticas como herramientas administrativas para lograr algunos cambios. Dijo además estar al tanto de que un programa de reforestación ha sido mencionado y reconocido en varias ocasiones tanto por la audiencia como por el comité y que se trata de algo que se llevara a cabo muy pronto en la medida que avance y comience con estos programas.

Sergio Cabañas dijo que apreciaba el esfuerzo que habían puesto en reemplazar a aquellos integrantes que habían estado faltando a las reuniones para de esta manera, promover la participación y poder tomar las mejores decisiones con respecto a este programa.

III. Período de Comentario Público

Ray Askins sugirió colocar sensores atmosféricos en la intersección de la calle segunda y la avenida César Chávez así como también sobre la calle segunda cerca de un restaurant y justo al lado de un aeropuerto ya que en su opinión estas son dos ubicaciones de importancia que deben ser monitoreadas para medir la contaminación y que le decepcionó no haberlas visto incluidas en la lista.

Amy Ramos les recordó a todos que se sintieran en libertad de llenar el formato de comentario público para que se abordaran sus preguntas, comentarios, o preocupaciones en la medida que esta reunión avance.

IV. Aprobación de la Minuta de la Reunión Anterior

Matt Dessert señaló que la minuta de la reunión anterior se les había enviado e indicó que ahora era el momento para solicitar una moción para aprobar y someter a votación tal aprobación de las minutas de las reuniones de 8 y 22 de mayo.

John Hernández hizo una moción para que aprobaran las minutas de ambas fechas. **Sergio Cabañas** secundó la moción y después de someterse a votación, las minutas del 8 y 22 de mayo respectivamente se aprobaron.

V. Presentaciones / Preguntas y Respuestas

Actualización del Plan de Monitoreo Atmosférico; Emily, Ramboll

John Hernández preguntó si los sensores Clarity Node y Purple Air ambos tienen la capacidad de medir compuestos orgánicos volátiles así como material particulado.

Emily indicó que los monitores de Purple Air no cuentan con esa capacidad pero que los sensores de Clarity Node si tienen la capacidad de medir compuestos orgánicos volátiles así como óxidos nitrosos.

Un asistente preguntó si ya se habían decidido por los Dylos.

Emily respondió que aun cuando no estaba necesariamente ya decididos por los Dylos si fueran a considerar otros sensores tendrían que contar con una muy buena razón para hacerlo ya que es de gran ganancia contar con la experiencia que CCV ya tiene con estos dispositivos y el éxito que han tenido operando esta red que tiene un alto índice cronológico y su transferencia de datos es eficiente. Añadió el decidirse por algún tipo de sensor distinto significaría volver a comenzar.

Un Asistente preguntó si existía la posibilidad de combinar sensores para monitorear otras emisiones de contaminantes y poder obtener nuevos datos

Matt Dessert mencionó haber ya sostenido páginas y tenido otras presentaciones en cuanto a los diferentes tipos de monitores y que se estaba considerando añadir como mínimo dos monitores de tóxicos a la red en el área de alrededor del Río Nuevo en Calexico ya que la comunidad ha venido solicitándolo desde hace ya algunos años.

Luis Olmedo añadió que en lo que se refiere a medir PM 10 y PM 2.5, los sensores Dylos están a la vanguardia cuando en lo que a implementación se refiere. Sin embargo mencionó que el programa observa criterio de tóxicos por lo que se requerirá de monitores normativos para este propósito y el Distrito de Control de Contaminación Atmosférica implementará y operará estos instrumentos normativos.

Emily dijo que su presentación abordaba los diferentes tipos de monitores más adelante por lo que continúo con la misma.

Thomas Brinkerhoff de APCD (por sus siglas en inglés), dijo que una vez que hubieran presentado su plan final ante el estado, podrían expandirlo como el comité considerara más conveniente para mejorarlo si así fuera requerido.

Rene Félix mencionó que según él lo entiende, una de sus responsabilidades es decidir cómo se llevará a cabo el monitoreo de acuerdo a las emisiones de contaminantes de cada zona monitoreada por lo que él considera que deben contar con una gama amplia en cuanto a método y equipo para este propósito. Añadió que en algunas zonas se debe medir compuestos volátiles orgánicos y gases de combustión así como sulfhídricos en algunas otras, además de material particulado.

Emily dijo que las inquietudes con respecto al sulfato de hidrógeno y compuestos orgánicos volátiles podrían ser abordadas cuando se hablara sobre los diferentes tipos de monitores que se podrían agregar.

Un Asistente preguntó que tanto los retrasaría el añadir nuevos tipos de monitores al plan de monitoreo

Emily comentó que CCV probablemente podría elaborar un poco más con respecto a su pregunta pero que tenía algo que ver con la manera en que se procesan los datos.

Christian del CCV explicó que si se deciden por un sensor diferente tendrían que contratar toda la mano de obra por fuera y esperar que contaran con toda la infraestructura necesaria. Añadió que ellos ya contaban con la infraestructura necesaria para la obtención de datos a nivel local para poder comenzar a enviar los datos AQ view, que es lo que tienen que hacer con todos los monitores que forman parte del programa AB 617. También mencionó contar con despliegue de datos que en este caso es el portal de IVAN en internet así como con una aplicación para obtener notificaciones sobre calidad de aire de manera gratuita que se encuentra actualmente bajo desarrollo para ser lanzada.

Un Asistente preguntó si valía la pena invertir en esos sensores y si los sensores ya en operación son los sensores más eficientes y de mejor costo disponibles en el mercado para que den continuidad al trabajo que se ha venido haciendo para beneficio de las comunidades en este corredor.

Luis Olmedo de CCV mencionó haber estado trabajando con tecnología de sensores desde el 2003 cuando colaboraron con la Asociación Pulmonar Americana, pero que en ese entonces carecían de validación científica. Sin embargo, dijo que en los últimos seis años habían logrado contar con la colaboración del Departamento de Salud, así como un comité técnico asesor que como parte de sus integrantes contaba con el Distrito de Control de Contaminación Atmosférica, la Universidad de Washington, UCLA, así como algunos consultores de comunidades indígenas que colaboraban con algunas comunidades indígenas cercanas y por tanto, contaban con expertos y científicos colaborando en esto. Añadió que gran parte del modelo del Programa AB 617 se tomó de la ciudad de Imperial, lo que la coloca en una posición muy fuerte en este momento

Matt Dessert mencionó que la parte educativa de este programa era parte clave para el mismo y que existían otros proyectos que son parte de este programa y que ayudarán no solo a reducir emisiones, sino también a reducir la exposición de la comunidad a estos contaminantes

VI. Medidas de Acción

CSC colabora y vota en cuanto a la ubicación de los monitores comunitarios; Co-presidentes / CCV

CSC expresaron sus opiniones y votaron con respecto a la ubicación de los diferentes monitores comunitarios.

Mark Baza mencionó que una de sus ubicaciones de prioridad sería la calle segunda y Cesar Chavez porque este se convertirá en el principal acceso de ida y vuelta a México y que esto añadirá tráfico al tráfico que ya se hace en la calle segunda.

John Hernández dijo que le gustaría abogar por el lado este de El Centro en algún lugar cerca de la Escuela Primaria Washington ya que hay alrededor de media docena de escuelas en esa área.

Luis Olmedo dijo haber notado que el sitio sugerido que en la lista aparecía como Planta de Agua El Centro en realidad era una planta d alcantarillado y no de agua.

Amy Ramos solicitó se aseguraran de incluir su nombre en sus boletas de votación y dijo que se les estaría enviando un enlace para que puedan participar en cuanto a la ubicación de estos monitores. También dijo que contarían con un puesto específico en la siguiente reunión en el que tendrían la última oportunidad de emitir su voto y que eso sería lo que utilizarían para informar sobre el plan comunitario de monitoreo. Añadió que los co-presidentes no verían sus nombres adjuntos a sus datos ya que solo se mostrarán los valores agregados.

VII. Actualizaciones de las Dependencias

Matt Dessert informó que el Distrito de Control de Contaminación Atmosférica se sigue reuniendo de manera semanal para abordar temas relacionados con el Programa AB 617. También mencionó haber estado en contacto con el Departamento de Salud Pública y la Oficina del Comisionado de Agricultura para abordar temas relacionados con plaguicidas. Mencionó también haber estado trabajando en organizar el presupuesto y que lo ideal sería que para la siguiente reunión se los presentaran más detalladamente. Dijo que también iban a presentar un proyecto de pavimentación de un estacionamiento en la escuela preparatoria de Calexico. Por otro lado, añadió estar trabajando en un acuerdo de servicios con otros proveedores de servicios, así como también se encontraban trabajando en su plan de monitoreo para ser presentado ante la Junta de Recursos Atmosféricos de California

Luis Olmedo exhortó a todos a ponerse en contacto con el Comité Cívico o e; Distrito Atmosférico para presentarles cualquier inquietud, pregunta o idea ya que ellos dialogan y toman todo en consideración para después traerlo a la mesa de este comité. También mencionó que están tratando de asegurarse de que el Programa AB 617 cuente con asignación de fondos este año de nuevo.

Thomas Brinkerhoff mencionó que se iban a llevar a cabo dos talleres públicos el día 19 de junio. Mencionó que cada sesión tomaría un poco más de dos horas y que una se llevaría a cabo a las 2 y otra a las 5:3 PM. Añadió que contarían con 11 mesa informativas tentativamente con temas relacionados con el programa AB 617. Extendió una invitación a todos los integrantes del comité así como a la audiencia en general para que participaran en estos talleres. Finalizó diciendo que en caso de cualquier duda, se podían poner en contacto con CCV y que esperaba contar con la presencia de todos el siguiente miércoles 19 en el Centro Médico Regional de El Centro en el Centro Comercial Valle Imperial.

Temas para la Agenda de la Siguiente Reunión

Matt Dessert informó que la siguiente reunión estaba programada para el 10 de julio. Dijo además que esperaba abordar algunos proyectos de reducción temprana de emisiones y que esperaba presentar puntos de información sobre el presupuesto a presentar, así como también mejores respuestas a las preguntas que reciben todo el tiempo.

Thomas Brinkerhoff de APCD dijo que en base a la información recibida en lo que se refiere a la ubicación de los monitores comunitarios así como la información que se brindó en cuanto a la tecnología que pretender implementar, van a contar con un borrador actualizado en el plan de monitoreo para ser finalizado en julio y luego presentado ante el estado y revisarlo en el futuro en la medida que el comité lo considere necesario.

VIII. Comentarios Finales /Cierre

Matt Dessert agradeció a todos por su asistencia y participación.

Luis Olmedo dijo estar contento de ver que los integrantes del comité estaban planteando preguntas muy importantes y los exhortó a todos a seguir hacienda preguntas difíciles ya que esto les ayuda a identificar áreas que han sido omitidas. Agradeció a la audiencia en general por su asistencia y participación

Se levanta la sesión

Presentation

Update on Draft CAMP & CERP

IMPERIAL COUNTY AB 617

COMMUNITY AIR MONITORING PLAN
COMMUNITY EMISSION REDUCTION PROGRAM
STATUS UPDATE

Imperial County AB 617 Community Steering Committee Meeting

July 10, 2019

RAMBOLL Bright ideas. Sustainable change.

COMMUNITY AIR MONITORING PLAN HISTORY AND STATUS

- Draft of Elements 1-5 presented and discussed at CSC meeting on 2/13/19
- Received comments from CARB on 3/13/19 and incorporated feedback into draft
- Full draft of Community Air Monitoring Plan was shared at CSC meeting on 5/22/19
- **Full draft of Community Air Monitoring Plan was submitted to CARB on 6/30/19**

RAMBOLL

COMMUNITY AIR MONITORING PLAN OUTSTANDING ITEMS

- Additional details on Roles & Responsibilities
- Final community monitoring locations
- Additional technical content for community monitoring
  - Quality control (QC) procedures
  - Analysis and interpretation of data
- Details on complementary monitoring
  - What do we want measure?
  - What equipment do we want to use?

RAMBOLL

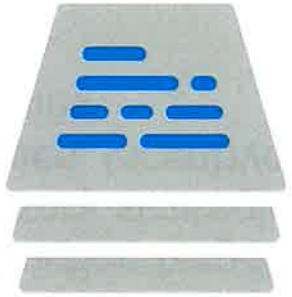
COMMUNITY AIR MONITORING PLAN PROPOSED SCHEDULE

- Today (7/10/19) - Update Steering Committee on the results of the recent poll and ranking of community monitor locations.
- 8/14/19 Steering Committee Meeting – Vote on final draft of the Community Air Monitoring Plan, which would likely exclude complementary monitoring details.
- 3rd and 4th Quarter 2019 – Educate Steering Committee on complementary monitoring options and revise monitoring plan to include those details.

RAMBOLL

COMMUNITY EMISSION REDUCTION PROGRAM STATUS

- Draft of CERP was provided in the agenda packet
- Contents of draft CERP, thus far:
  - Introduction & background on AB617
  - Health based air quality objectives
  - Community partnerships and profile
  - Technical foundation (existing data, source attribution, sensitive receptors, land use, existing policies and programs, compliance assessment)
  - Enforcement overview



RAMBOLL

COMMUNITY EMISSION REDUCTION PROGRAM OUTSTANDING ITEMS

- Finalized Community-Level Emission Inventory
- Targets/Goals Section – Must include specific, quantifiable, measurable targets to focus and accelerate actions to provide direct emission reductions within the community
- Strategies Section – Strategies must be identified to meet emission reduction targets and associated goals. Types of reduction strategies may include: regulatory strategies, facility risk reduction audits, air quality permitting, enforcement strategies, incentive program strategies, and land use, transportation, and mitigation strategies
- Tracking Progress Section – Must include:
  - Metrics to track annual progress on emission reductions achieved, status of rules and regulations adopted, annual enforcement activities, etc.
  - Air quality and exposure metrics, such as monitoring data and air quality modeling

RAMBOLL

COMMUNITY EMISSION REDUCTION PROGRAM PROPOSED SCHEDULE

- July/August 2019 – CSC Bonus meeting to discuss goals/targets and strategy
- Prior to 8/14 CSC Meeting – ICAPCD will share the near-final draft of CERP
- 9/11/19 - CSC to vote on final CERP
- Late September, 2019 – CERP will be presented at Imperial County Board Meeting
- October 2019 – CERP to be submitted to CARB

RAMBOLL

QUESTIONS?

RAMBØLL

AIR POLLUTION CONTROL DISTRICT

DRAFT

IMPERIAL COUNTY YEAR 1 COMMUNITY EMISSIONS REDUCTION PROGRAM PLAN FOR THE EL CENTRO-HEBER-CALEXICO CORRIDOR

JULY 2019

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IMPERIAL COUNTY
YEAR 1 COMMUNITY EMISSIONS REDUCTION PROGRAM PLAN FOR THE EL CENTRO-HEBER-CALEXICO CORRIDOR

Prepared for

Imperial County AB 617 Steering Committee

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JULY 2019

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Abbreviations and Acronyms

[TO BE DEVELOPED]

1 Introduction and Background

1.1 Introduction

This Year 1 Community Emission Reduction Program Plan ("Emission Reduction Plan" or "Plan") presents objectives and methodologies for the Community Emission Reduction Program in the El Centro-Heber-Calexico Corridor in Imperial County, California ("Community"). This Plan was developed in response to the selection of this Community to implement an emissions reduction program under the California Air Resources Board (CARB) Community Air Protection Program (CAPP), a program established to help implement California Assembly Bill 617 (AB 617). This Plan specifically addresses the planning elements laid out in CARB's Community Air Protection Blueprint ("Blueprint"), a guidance document developed for the CAPP.[1] Each of the planning elements ultimately serve to address two main health-based objectives, which are:

- Maximizing progress on reducing exposure to toxic air contaminants that contribute to cumulative exposure burdens within selected communities; and
- Reducing exposure caused by localized particulate matter less than 2.5 microns in aerodynamic diameter ($PM_{2.5}$) sources to achieve healthful levels of $PM_{2.5}$ within the community.

This Plan demonstrates how the Community plans to reduce emissions at the local scale by identifying targets and implementing strategies to improve local air quality and ultimately satisfy these health-based objectives.

1.2 Background

1.2.1 Assembly Bill 617

On July 26, 2017, California Governor Jerry Brown signed into law AB 617, an act to amend and add sections regarding air pollution to California's Health and Safety Code. The bill directs CARB and local air districts throughout the state (including the Imperial County Air Pollution Control District [ICAPCD or "District"]) to enact measures to promote public health and welfare by reducing air pollution on a local scale, particularly in communities that are disproportionately burdened by air pollution. AB 617 was designed to accomplish this via the establishment of the CAPP, which puts the emphasis on community-focused actions that go beyond the regional and statewide air quality programs already in place.

[1] California Air Resources Board. 2018. *Community Air Protection Blueprint.* October. Available at: https://ww2.arb.ca.gov/sites/default/files/2018-10/final_community_air_protection_blueprint_october_2018.pdf. Accessed: May 2019.

AB 617 was designed to specifically improve air quality in communities with increased concentrations of criteria air pollutants[2] (CAPs) and toxic air contaminants[3] (TACs). These improvements are to be accomplished through community emissions reduction programs, community air monitoring, or both. Section 1.2.2 describes the process by which the first round of communities was selected, including the El Centro-Heber-Calexico Corridor in Imperial County.

1.2.2 Community Nomination Overview

As part of the CAPP, CARB's Governing Board selected California communities to participate by implementing a community air monitoring program, a community emissions reduction program, or both. AB 617 stipulated that selection of the first round of communities was to be completed by October 1, 2018 and annually thereafter (i.e., beginning January 1, 2020). Each year, the selection process will involve three steps: Identification, Assessment, and Selection. During the Identification phase, CARB staff will update the running list of potential communities for participation in the CAPP. Input will be collected from air districts across the state and from the Office of Environmental Health Hazard Assessment (OEHHA), as well as internally from CARB's own experience and data resources. Community members will also be able to nominate their own or other communities for consideration. Once this broad list of potential communities has been updated, the next step is to assess the options.

In the Assessment phase, CARB staff will continue to consult with community stakeholders, OEHHA, and the air districts to determine which potential communities are experiencing disproportionate burdens due to cumulative air pollution exposure. The CAPP Blueprint details the factors that are to be evaluated during this phase, which may include concentrations of specific CAPs and TACs, quantified health risk estimates based on modeling, the proximity of sensitive populations to significant sources of air pollution, and socio-economic factors. Once the available and relevant data has been assessed, the final phase, Selection, is initiated.

1.2.3 Imperial County Community Nominations

In anticipation of the selection of communities to participate in the CAPP, both local air districts and citizens alike identified communities and submitted nominations to CARB. Ahead of the first selection due date of October 1, 2018, ICAPCD partnered with a local advocacy and environmental justice group known as Comite Civico del Valle, Inc. ("CCV") to author a report entitled *Imperial County AB 617 Community Nominations*,[4] with the purpose of informing CARB on which communities within Imperial County should be selected to participate in the first year of

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[2] Includes the six federally regulated air pollutants with National Ambient Air Quality Standards established by the USEPA as a requirement of the Clean Air Act. Additional information available at: https://www.epa.gov/criteria-air-pollutants. Accessed: May 2019.

[3] Defined by the California Health and Safety Code as air pollutants which may cause or contribute to an increase in mortality or an increase in serious illness, or which may pose a present or potential hazard to human health. Additional information available at: https://oehha.ca.gov/air/toxic-air-contaminants. Accessed: May 2019.

[4] Available at: https://ww2.arb.ca.gov/resources/documents/imperial-county-ab617-community-nominations-submitted-partnership-comite-civico. Accessed: May 2019.

the CAPP. This report included relevant data regarding health, socioeconomics, and air quality monitoring for two cities (Calexico and El Centro) and one unincorporated community (Heber) within Imperial County. The geographic proximity of these three areas lent to their being grouped together as a single AB 617-nominated community known as the El Centro-Heber-Calexico Corridor ("Corridor"), which ICAPCD nominated as its first community for participation in the CAPP.

On September 27, 2018, the CARB Board made final its selections for the Year 1 communities to participate in the CAPP.[5] The El Centro-Heber-Calexico Corridor was chosen for both community air monitoring and a community emissions reduction program.

1.2.4 Community Steering Committee

A hallmark of the CAPP is community-driven action. AB 617 was designed to allow members from within the selected communities to take an active role in the development of their own air monitoring plans and emission reduction programs. Those who live and work in a selected community are both the most familiar with it and the most invested in promoting its environmental quality. Thus, AB 617 places an emphasis on community-driven action achieved under the oversight of groups known as community steering committees. These committees are to be comprised of primarily individuals who live and work within the communities they will represent. The CAPP Blueprint suggests that these committees include "participants from local community-based environmental justice organizations, schools, land use planning agencies, transportation agencies, local health departments (e.g., hospitals, clinics, physical rehabilitation centers, public health counseling services), academic researchers, and labor organizations, as appropriate."[6]

In late 2018, ICAPCD in conjunction with CCV assembled a steering committee for the El Centro-Heber-Calexico Corridor. Referred to as the AB 617 Community Steering Committee ("Steering Committee"), this group is intended to be involved with all aspects of the Community Emission Reduction Program and the community air monitoring program, including participant recruitment, identification of key objectives, monitoring site selection, emission reduction strategy selection, and evaluation and dissemination of results. The Steering Committee is also intended to maintain communication with other community members throughout the planning process to gather input from concerned citizens and facilitate ongoing discussion.

1.3 Objective

While the El Centro-Heber-Calexico Corridor was designated as a community to develop both a community air monitoring plan and a community emissions reduction program, this Plan serves to satisfy the requirements of only the latter. It was developed according to the guidelines laid out in the CAPP Blueprint. The goal in developing this Emission Reduction Plan is ultimately to

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[5] California Air Resources Board. 2018. *Resolution 18-37: Assembly Bill 617 Community Air Protection Program – Community Selection*. Available at: https://www.arb.ca.gov/board/res/2018/res18-37.pdf?_ga=2.16620022.1778124676.1548719155-1155382275.1462320702. Accessed May 2019.

[6] California Air Resources Board. 2018. *Community Air Protection Blueprint*. October. Available at: https://ww2.arb.ca.gov/sites/default/files/2018-10/final_community_air_protection_blueprint_october_2018.pdf. Accessed: May 2019.

develop local programs that go beyond existing efforts to reduce air pollution. This Plan was designed to be "action oriented", i.e., it includes direction for how the strategies should be implemented and how the emission reductions will be tracked and enforced. Ultimately, these strategies contribute to the overall objective of promoting public health and welfare in the Community through improvements in local air quality.

1.3.1 Health-Based Air Quality Objectives

The overarching goal of community emissions reduction programs is to reduce CAP and TAC emissions in order to mitigate the impacts of exposure. While each of the communities selected to participate in the CAPP faces its own distinct air quality and health challenges, broad objectives provide a framework that emissions reduction programs can be developed around. Accordingly, the CAPP Blueprint specifies the following broad health-based air quality objectives which are mandatory to include in community emission reduction programs:

- Maximizing progress on reducing exposure to TACs that contribute to the cumulative exposure burden.
- Reducing exposure caused by local $PM_{2.5}$ sources to achieve healthful levels of $PM_{2.5}$ within the community.

Toxic air contaminants (TACs) include a long list of pollutants that contribute to the cumulative exposure burden in an area. Relatively common TACs include diesel particulate matter (emitted from diesel-fueled engines), hexavalent chromium, lead, benzene, and toluene. While many statewide programs in California have worked to reduce TAC emissions in recent decades, some communities are currently experiencing disproportionate exposures to them. Health risks associated with exposure to TACs may include acute and/or chronic illnesses, or increased cancer risks.

Communities in California also face air quality issues related to CAPs. Specifically, $PM_{2.5}$ and ozone (O_3) are of particular concern due to their elevated concentrations, which exceed federal standards in many California communities. However, the CAPP Blueprint only incudes a mandatory health-based air quality objective for addressing $PM_{2.5}$. Ozone is not addressed because of the nature of its formation. Ground-level O_3 in the atmosphere is formed over time by the reaction of precursor pollutants rather than being directly emitted by sources. The complex chemical reactions that form O_3 occur on a regional scale, widely dispersed from wherever the precursors were originally emitted. In contrast, particulate matter (and specifically $PM_{2.5}$) in the atmosphere is the result of both regional and localized emissions. Thus, targeted emissions reductions on a local scale can reduce particulate exposure in overburdened areas in a way that reductions of O_3 precursor emissions cannot.

In addition to the two mandatory objectives specified in the CAPP Blueprint, the following additional objectives have been identified through the Community Steering Committee process:

- [OBJECTIVE]
- [OBJECTIVE]

1.4 Document Organization

This Plan was developed and organized following the guidelines laid out in the CAPP Blueprint prepared by CARB. Specifically, each of the subsequent chapters in this Plan addresses one or more planning elements (summarized in Table 1.1 below).

Table 1.1. Community Emissions Reduction Program Planning Elements

Chapter	Title	Planning Elements Addressed
1	Introduction and Background	
2	Community Partnerships and Public Engagement	• Form Community Partnerships • Public Outreach
3	Understanding the Community	• Community Profile • Technical Foundation
4	Targets and Strategies	• Emission Reduction Targets • Proximity-based Goals • Emissions and Exposure Reduction Strategies • Implementation Schedule
5	Enforcement Plan	• Three-year Enforcement Review • Compliance Mechanisms
6	Metrics to Track Progress	• Required Metrics • Recommended Additional Metrics
7	California Environmental Quality Act	• California Environmental Quality Act
8	Conclusion and Checklist	

2 Community Partnerships and Public Engagement

2.1 Community Steering Committee

Community members are well suited for providing direct insight on the air quality issues in their community and their input is necessary to ensure effective community-focused strategies. As part of this planning element, a community steering committee must be formed to facilitate communication between the Community members and the air district, as well as to carry out emission reduction goals and objectives. Additionally, the Steering Committee is used to develop outreach opportunities to ensure that the Community is able to participate in the decision-making process. The Steering Committee formed by the ICAPCD and CCV fulfills the requirements of this planning element.

2.1.1 Community Steering Committee Development Process

The purpose of the Steering Committee is to design goals and objectives, provide information to community members, and support local actions related to emission reductions. The Steering Committee for the El Centro-Heber-Calexico Corridor was convened by a collaborative effort between ICAPCD and CCV, following the selection of the Corridor as a CAPP Year 1 community. Since its formation, the Steering Committee has been involved with all aspects of both this Emission Reduction Plan and the Community Air Monitoring Plan. In the formation of this Plan, Steering Committee activities have included and will continue to include participant recruitment, identification of key objectives, development of strategies for the Emissions Reduction Plan, and evaluation and dissemination of results. Additionally, the Steering Committee was intended to serve as a communication channel with other community members to gather input from concerned citizens and facilitate ongoing discussion.

On November 1, 2018, the ICAPCD hosted an informational meeting regarding the development of an AB 617 steering committee for the El Centro-Heber-Calexico Corridor. Open to the general public, the purpose of this meeting was to allow Community members to obtain information about the Community's upcoming air monitoring and emission reduction programs. Topics discussed at the meeting included the background of AB 617, the initial efforts of CCV and ICAPCD conducted to that point, plans for upcoming community projects to be implemented as part of CAPP participation, and development of the Steering Committee.

At the November 1 meeting, emphasis was placed on getting the Steering Committee up and running, with the goal of holding its first meeting on November 14. ICAPCD staff explained that one of the initial objectives would be to develop bylaws for the group. Applications for the Steering Committee were distributed, and a due date was set for November 5. The application form posed specific questions to applicants designed to gauge their level of interest in participating in the Steering Committee, as well as what special knowledge or perspective they could contribute to the group towards ensuring that the larger community is being fairly represented and its wellbeing considered throughout the AB 617 process.

Following this application period, Steering Committee members were evaluated and selected. Table 2.1 displays the members who were chosen for the first AB 617 Steering Committee for the Community, the majority of which are residents of the El Centro-Heber-Calexico Corridor.

Table 2.1. AB 617 Community Steering Committee Members, 2018-2019

Representing	Members	Alternates
Co-Chair (ICAPCD)	Matt Dessert	Reyes Romero
Co-Chair (CCV)	Luis Olmedo	Christian Torres
Community Corridor	Mersedes Martinez	Rosa Guerrero
Community Corridor	Diahna Garcia-Ruiz	Bob Fischer
Community Corridor	Rene Felix	Tomas Oliva
Community Corridor	Mireya Diaz	Sandra Mendivil
Community Corridor	Kristian Salgado	Chris Gomez Wong
Community Corridor	Blake Plourd	Steven Snow
Community Corridor	Sergio Cabanas	Michael Moore
Community Corridor	Mark Baza	Virginia Mendoza
Community Corridor	Aide Fulton	Diego Gamboa
Community Corridor	Mary Salazar	Irene Garcia
Community Corridor	John Hernandez	Paul Monarrez
Community Corridor	Jose Celaya	VACANT
Community Corridor	VACANT	VACANT

As Table 2.1 displays, the Steering Committee consists of 15 members made up of two *ex-officio* co-chairs (representing ICAPCD and CCV) and 13 positions for Community representatives. Some of these Community representatives are affiliated with various organizations around Heber, El Centro, and Calexico, including school districts, local government commissions, businesses, and non-profit organizations. They were selected to participate in the Steering Committee based on their potential to act as leaders and contribute technical expertise during planning. In the event that any Steering Committee members are unable to perform their duties, alternates were selected to step in.

2.1.2 Community Steering Committee Charter

In January 2019, staff from ICAPCD and CCV developed a draft AB 617 Steering Committee Charter ("draft Charter") for consideration by the Steering Committee. The draft Charter was discussed and approved by the Steering Committee during the February 13th Steering Committee Meeting. The Charter was then submitted to the ICAPCD Governing Board, comprised of the Imperial County Board of Supervisors. Formally approved by the Board on March 19, 2019, the

Charter establishes the authority and purpose of the Steering Committee along with its bylaws, and the intended structure and schedule for regular Steering Committee meetings.[7]

The Steering Committee is responsible for holding regular meetings to discuss topics related to the CAPP and provide recommendations for action to the ICAPCD Board. Topics of discussion can include approaches for community engagement and outreach, sources contributing to the Community's air quality challenges, strategies for developing and implementing the community air monitoring and emissions reduction programs, targets and goals, and metrics to track progress. The Charter specifies that these meetings be held at least once per month, unless there is a lack of agenda topics, in which case a vote may be held to cancel the following month's meeting. Special meetings may also be held as required. A summary of the Steering Committee meetings conducted to date is available in Appendix A. A copy of the Charter is presented as Appendix B.

2.2 Outreach Summary

As part of the commitment to community engagement and outreach, ICAPCD staff operates a website dedicated to AB 617 activity in Imperial County.[8] The site offers background information on AB 617 and has pages for information on the Steering Committee members, meetings and events (including notes and recordings from past meetings), contact information, and links to important resources such as the CARB home page and websites for local air monitoring networks. Additionally, both District and CCV staff have maintained that they will be available as resources to anyone with questions or just looking to gather more information about CAPP implementation in Imperial County. Information regarding the dedicated District contact person for this Plan is provided below.

Dedicated ICAPCD Contact Person

Belen Leon
Air Pollution Control District Project Manager
Phone: 442-265-1800
Email: belenleon@co.imperial.ca.us

The Steering Committee meetings are open to the public. They are advertised via email notifications, as well as flyers posted to the County's website. To enhance public understanding and participation, a professional interpretation service is available at each meeting to provide translation services. At each meeting, a specific agenda item is included to allow for the public to issue comments. These comments are either addressed during the meeting or included as a

[7] ICAPCD. 2019. AB 617 Community Steering Committee Charter. March 19. Available at: https://docs.wixstatic.com/ugd/99eb03_645f259f6bb44a4f81bedd12dfc98ce6.pdf. Accessed: June 2019.
[8] ICAPCD. AB 617 Imperial County: Calexico, Heber, El Centro Corridor. Available at: https://www.icab617community.org/. Accessed: May 2019.

discussion point for future meetings. Appendix C includes sign-in sheets, agendas, minutes, invitation flyers, and presentations for each Steering Committee Meeting.

Community input received during the Steering Committee meetings has demonstrated the value of collaborating with members of the Community on both the Emissions Reduction Plan and the Community Air Monitoring Plan. Going forward, the Steering Committee will continue to engage with the public through monthly meetings. The flyer notification system has worked well in terms of spreading the word about meetings and promoting attendance, so it will continue to be utilized.

Finally, the ICAPCD has an established social media presence which they utilize to promote engagement by the Community in matters related to air quality and the AB 617 plans. The District operates a Facebook page[9] where regular posts are made to notify the public about important items such as high wind advisories, times when burning is and is not permitted, and daily air quality reports that provide summaries of ambient pollutant measurements recorded at regulatory monitoring stations around the County, as well as advertisements for upcoming Steering Committee meetings and photos and videos from past meetings. Similar posts are also made to the District's Instagram[10] and Twitter pages.[11]

[9] Available at: https://www.latest.facebook.com/Countyair/. Accessed: May 2019.
[10] Available at: https://www.instagram.com/county_air/. Accessed: May 2019.
[11] Available at: https://twitter.com/county_air. Accessed: May 2019.

3 Understanding the Community

3.1 Community Profile

Imperial County is located in a primarily desert region of southern California and shares an international border with Mexico. The Imperial Valley runs approximately north-to-south through the center of the County and extends into Mexico. The portion of the valley just north of the U.S.-Mexican border contains the El Centro-Heber-Calexico Corridor (see Figure 3.1). The population of Imperial County is approximately 170,000,[12] while the population in the Corridor is approximately 58% of that or 100,000. The principal industries in the County overall are farming and retail trade. The Community contains relatively few $PM_{2.5}$ stationary sources, but can experience significant emissions from vehicular traffic, particularly near Calexico and the international ports-of-entry into the United States. Other significant sources of direct $PM_{2.5}$ in the region are unpaved road dust, fugitive windblown dust, farming operations, and managed burning and disposal. The major air pollutant source types affecting the Community are presented in greater detail in Section 3.2.

The local air quality is not only affected by the emissions in the area, but also by the degree to which these pollutants become dispersed in the atmosphere following emission or secondary formation (in the case of ozone). One key factor affecting pollutant dispersion in the Imperial Valley is the degree of stability of the local atmosphere. Weather patterns and air currents dictate the degree of atmospheric stability in a region, which regulates the amount of air exchange or "mixing" that can occur in the air basin. Factors like restricted mixing and low wind speeds are associated with higher atmospheric stability. At times, Imperial County can experience a phenomenon known as a "subsidence inversion" which greatly restricts the vertical mixing of air. This leads to highly stable atmospheric conditions which can cause the stagnation of airflow and buildup of pollutants for days at a time, contributing to exceedances of air quality standards.

The Community exists in an area that is designated as nonattainment of the National Ambient Air Quality Standards (NAAQS) for 8-hour O_3, 24-hour particulate matter less than 10 microns in aerodynamic diameter (PM_{10}), and 24-hour and annual $PM_{2.5}$. The NAAQS are standards established by the United States Environmental Protection Agency (USEPA) to be protective of human health and welfare. Areas designated as nonattainment are required to develop State Implementation Plans (SIPs) to address the underlying air quality issues and advance air quality improvement measures to achieve the NAAQS. As such, the ICAPCD has developed updated SIPs for PM_{10},[13] $PM_{2.5}$,[14] and O_3[15] within the past several years. While beneficial, these plans are designed to address air quality issues at the regional level for Imperial County. In contrast, this

[12] OEHHA. 2018. CalEnviroScreen 3.0. Available at: https://oehha.ca.gov/calenviroscreen/report/calenviroscreen-30. Accessed: May 2019.

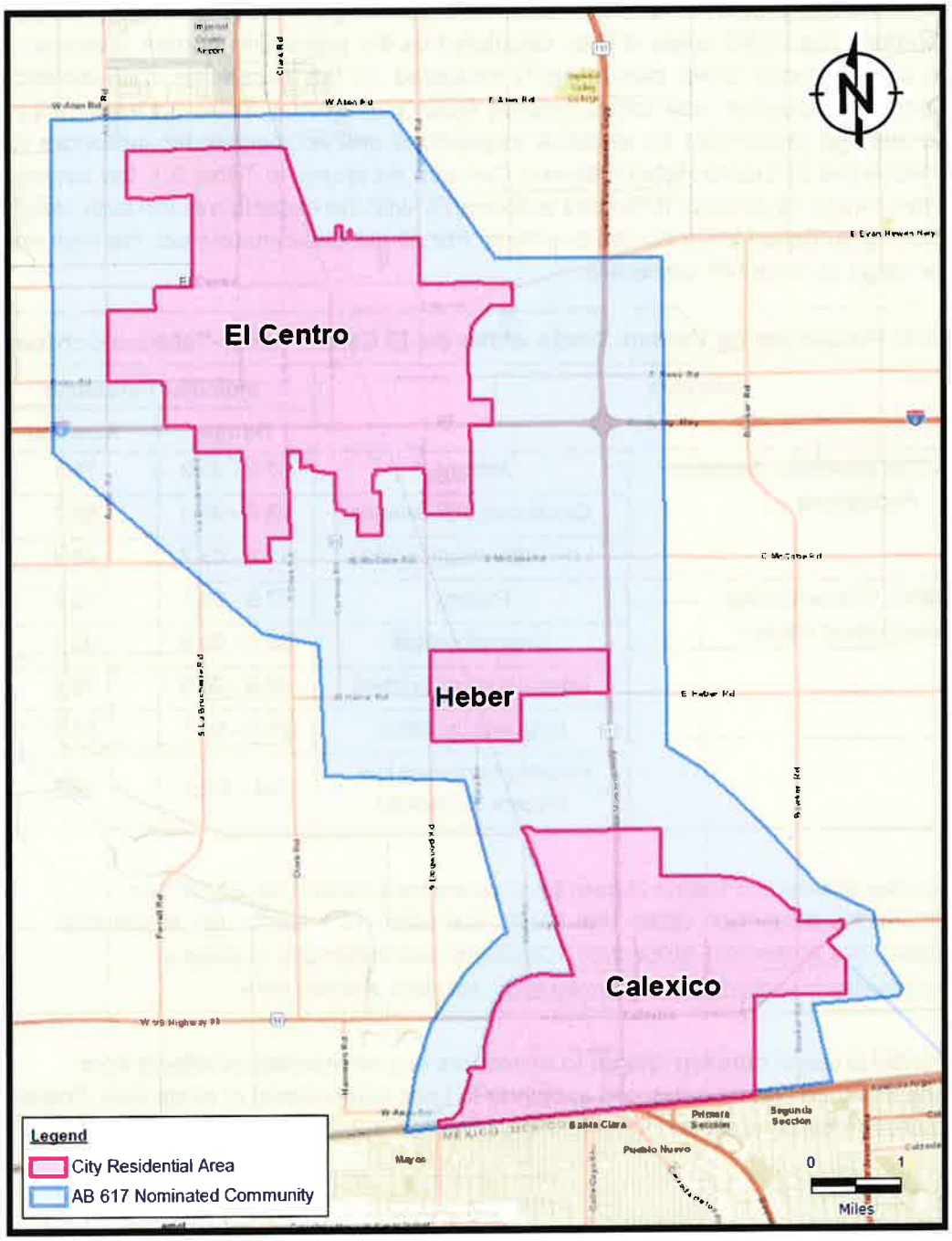
[13] ICAPCD. 2018. Imperial County 2018 Redesignation Request and Maintenance Plan for Particulate Matter Less Than 10 Microns in Diameter. Available at: https://www.arb.ca.gov/planning/sip/planarea/imperial/sip.pdf. Accessed: May 2019.

[14] ICAPCD. 2018. Imperial County 2018 Annual Particulate Matter Less Than 2.5 Microns in Diameter State Implementation Plan. Available at: https://www.co.imperial.ca.us/AirPollution/otherpdfs/2018-IC-PM25SIP.pdf. Accessed: March 2019.

[15] ICAPCD. 2017. Imperial County 2017 State Implementation Plan for the 2008 8-hour Ozone Standard. Available at: https://www.arb.ca.gov/planning/sip/planarea/imperial/2017O3sip_final.pdf. Accessed: May 2019.

Plan, prepared in accordance with AB 617, expands upon previous efforts in the SIPs to specifically focus on the El Centro-Heber-Calexico Corridor. A selection of air quality findings pertaining to the Community from the most recent Imperial County SIPs is provided in Section 3.2.1.1.

Figure 3.1. El Centro-Heber-Calexico Corridor



Aside from understanding the direct air quality burden, it is also essential to review the socioeconomic issues facing the Community to inform development of the Plan. Individuals with health ailments and lower socioeconomic status are more vulnerable to health impacts resulting from air pollution. To assess the impacts of environmental and socioeconomic factors on each census tract in the State of California, OEHHA and the California Environmental Protection Agency (CalEPA) developed a mapping tool called CalEnviroScreen (CES3). Census tracts are ranked statewide and assigned a percentile for each indicator. A high percentile indicates a worse exposure or burden. The CES3 score is then calculated as the population burden (average of exposure and environmental effect percentiles[16]) multiplied by the population characteristics (average of sensitive population and socioeconomic factor percentiles). Table 3.1 summarizes the range and average percentiles for sensitive populations and socioeconomic indicators for census tracts within the El Centro-Heber-Calexico Corridor. As shown in Table 3.1, the average percentile in the Corridor for all listed indicators is above 70, with the exception of low birth-weight infants and housing burdened low-income household. For all but one census tract, the high end of the indicator range is in the 90th percentile.

Table 3.1. CES3 Percentiles for Census Tracts within the El Centro-Heber-Calexico Corridor

Indicator		Indicator Percentile	
		Range	Average
Population Characteristics: Sensitive Populations	Asthma	57.6 - 95.2	79.1
	Cardiovascular disease	63.6 - 96.4	90.7
	Low birth-weight infants	11.3 - 85.7	45.4
Population Characteristics: Socioeconomic Factors	Poverty	17.9 - 99.1	72.5
	Unemployment	38.5 - 99.9	82.1
	Educational attainment	42.6 - 96.5	78.0
	Linguistic isolation	28.6 - 99.7	81.7
	Housing burdened low-income household	0.4 - 92.0	49.2

Notes:

[a] Indicator percentiles obtained from CalEnviroScreen 3.0 for census tracts 6025011100, 6025011201, 6025011202, 6025011300, 6025011400, 6025011500, 6025011600, 6025011700, 6025011801, 6025011802, 6025011803, 6025011900, 6025012001, 6025012002, 6025012100, and 6025012200. Available at: https://oehha.ca.gov/calenviroscreen/report/calenviroscreen-30. Accessed: February 2019.

Additional potential areas of concern related to exposures and environmental effects from pollution include impaired water bodies and exposure to toxic components of pesticides. These and other air pollution burdens are explored further in Section 3.2.1.1.

[16] Environmental effects component is weighted one-half when combined with the exposures component.

3.2 Technical Foundation

A strong technical foundation is necessary to understand the sources of air pollution impacting a community and to provide a means of measuring emission reductions. The technical foundation serves to accomplish the following related to an emission reduction program:

- Establish a baseline understanding of the air pollution challenges in the community;
- Identify the key air pollutants and sources for programmatic focus;
- Support the development of targets and strategies; and
- Provide a mechanism to track progress.

These elements of the Plan's technical foundation are explored in the sections that follow.

3.2.1 Existing Cumulative Air Quality Exposure Burden

3.2.1.1 Evaluation of Existing Data

Cumulative air quality exposure burden accounts for exposure to air pollution in combination with the vulnerability of the population. The cumulative air quality exposure burden is evaluated through a set of factors relating to air pollution and socioeconomic status, including:[17]

- Concentrations of pollutants from measurements, air quality modelling, or other air pollution quantifier;
- Density of pollution sources and magnitude of emissions within the community;
- Cancer risk estimates within the community;
- Sensitive populations located in close proximity to emission sources;
- Public health data that are representative of the incidence or worsening of disease related to air quality; and
- Socioeconomic factors.

As discussed in Section 3.1, the Corridor ranks as high as the 99th percentile for socioeconomic factors within the State of California. This section evaluates the existing data from air quality monitors and CES3 indicators for air pollution.

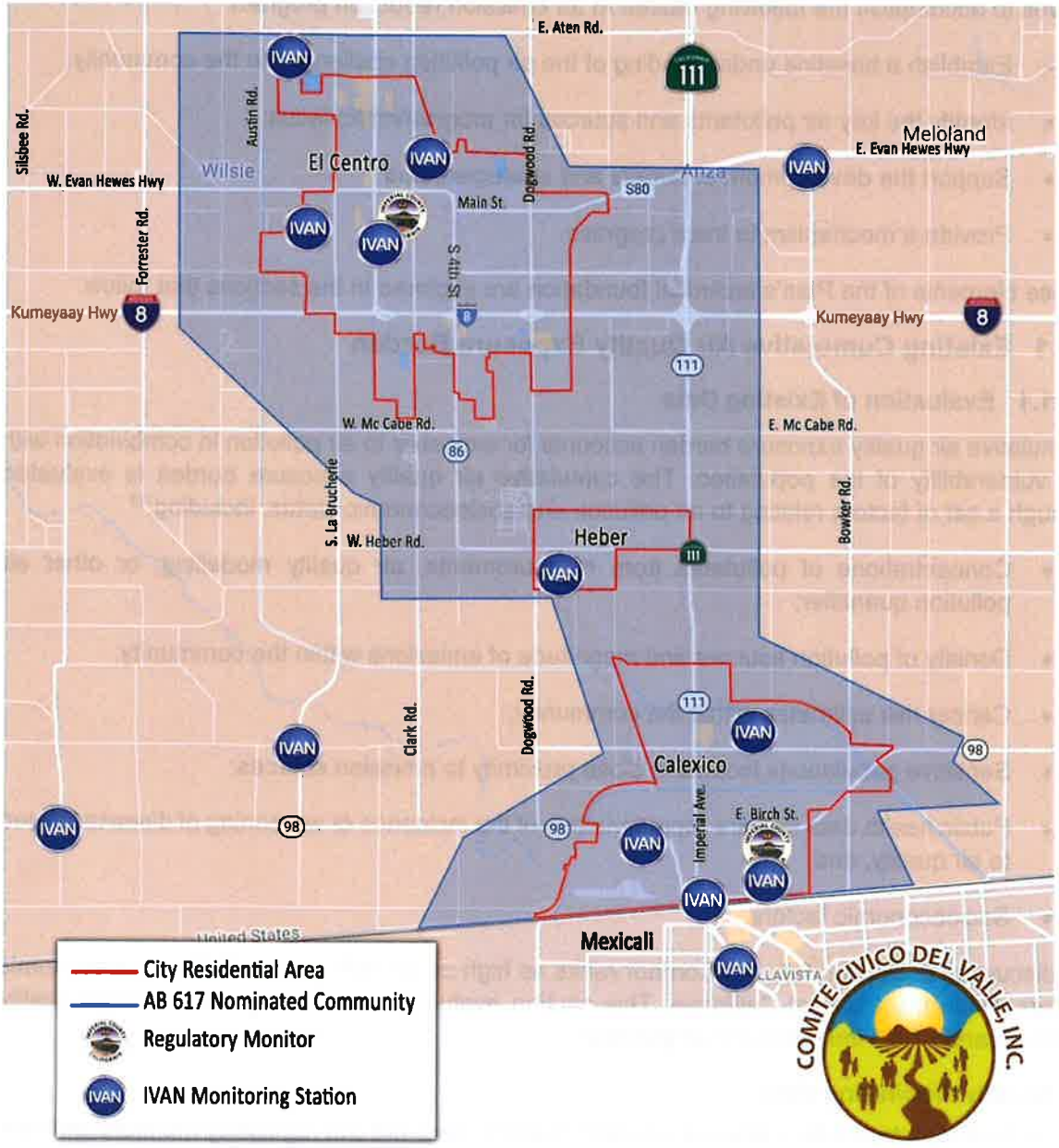
Air Quality Monitoring Data

Within the El Centro-Heber-Calexico Corridor footprint, there are two regulatory monitors and nine community monitors. The community monitors are a part of CCV's Identifying Violations Affecting

[17] CARB. 2019. High Cumulative Exposure Burden. Available at: https://ww2.arb.ca.gov/capp-resource-center/community-assessment/high-cumulative-exposure-burden. Accessed: May 2019.

Neighborhoods (IVAN) network. The locations of all eleven monitors, plus three additional community monitors located adjacent to the Corridor, are presented in Figure 3.2.

Figure 3.2. Locations of Air Quality Monitors in the El Centro-Heber-Calexico Corridor



Regulatory Monitoring

Existing regulatory monitors within the Corridor include the El Centro monitoring station and the Calexico-Ethel monitoring station. The El Centro monitoring station was installed in 1986 and is

maintained by ICAPCD. It is located at 150 9th Street in El Centro. The monitoring station is classified as urban and is surrounded by government and commercial buildings, with large agricultural areas to the east and west of the El Centro city boundaries. The El Centro monitoring station records measurements for O_3, carbon monoxide (CO), nitrogen dioxide (NO_2), $PM_{2.5}$, and PM_{10}.

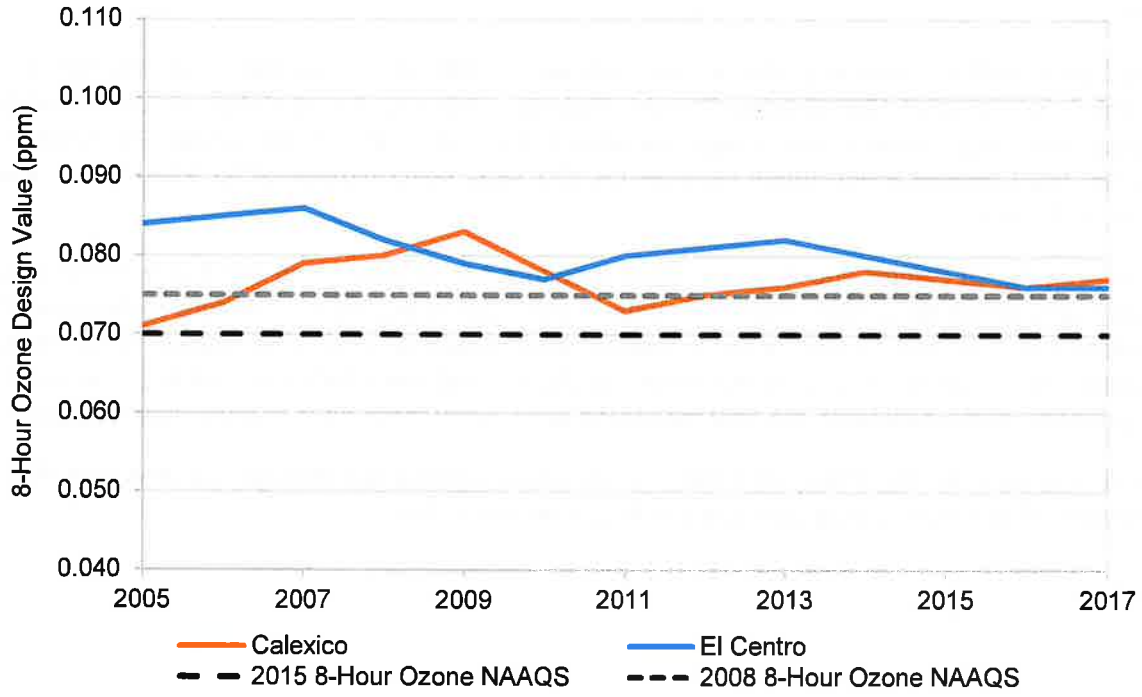
The Calexico-Ethel monitoring station was installed in 1994 and is operated and maintained by CARB. It is located at 1029 Belcher Street in Calexico. This monitoring station is surrounded by a suburban neighborhood and is approximately 0.75 miles north of the United Sates-Mexico border. The Calexico-Ethel station monitors O_3, CO, NO_2, sulfur dioxide (SO_2), $PM_{2.5}$, PM_{10}, lead (Pb), and toxics.

Data from the El Centro and Calexico-Ethel monitors are validated and used to determine the federal attainment status for Imperial County.[18] Both monitoring stations feature meteorological sensors that measure temperature, humidity, wind direction, and wind speed. Since these monitors are used for regulatory purposes, results are not immediately available to the public. Additionally, some pollutants are only monitored once every three days or once every six days.

Monitoring data for O_3, PM_{10}, and $PM_{2.5}$ is shown in Figures 3.3 through 3.9 and provides a snapshot of recent air quality conditions in El Centro and Calexico.

[18] There are three additional regulatory monitoring stations in Imperial County which are located outside of the Corridor. These include the Brawley monitoring station, the Niland monitoring station, and the Westmorland monitoring station.

Figure 3.3. Comparison of 8-hour Ozone Design Values at the Calexico and El Centro Monitoring Stations to the NAAQS



Monitoring data for O_3 at the Calexico and El Centro monitoring stations[19] indicate that levels there have remained relatively constant since 2005, with no significant trend upwards or downwards. Furthermore, the 2017 Ozone SIP for Imperial County[20] demonstrated how international transport of emissions from Mexico of O_3 precursor pollutants contributes to ambient O_3 levels in Imperial County. This effect is especially pronounced at the regulatory monitors closest to the U.S.-Mexico border (i.e., El Centro and Calexico), and contributes to O_3 measurements exceeding the NAAQS.

[19] The design value for the 8-hour Ozone NAAQS is computed as the annual fourth-highest daily maximum 8-hour concentration measured at the monitor, averaged over 3 years.

[20] ICAPCD. 2017. Imperial County 2017 State Implementation Plan for the 2008 8-hour Ozone Standard. Available at: https://www.arb.ca.gov/planning/sip/planarea/imperial/2017O3sip_final.pdf. Accessed: May 2019.

Figure 3.4. Comparison of Annual $PM_{2.5}$ Design Values at the Calexico and El Centro Monitoring Stations to the NAAQS

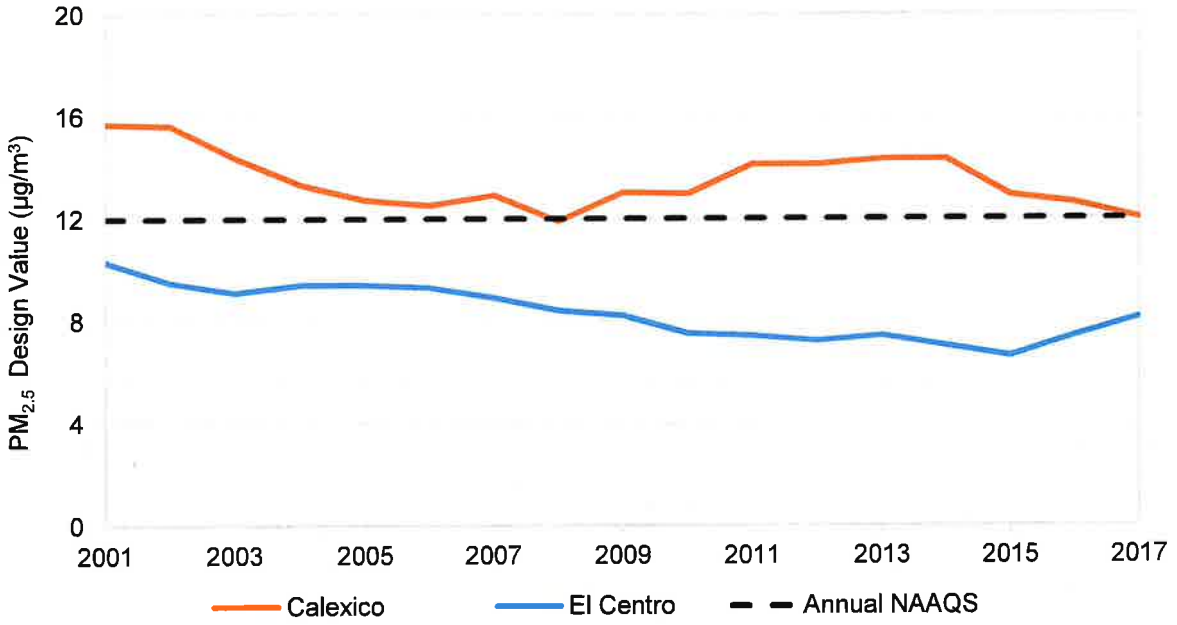


Figure 3.4 displays data for $PM_{2.5}$ at the Calexico and El Centro monitoring stations and indicates that levels have exhibited a slight downward trend since 2001 at both stations. However, the $PM_{2.5}$ design values (i.e., the annual mean values averaged over three years) for 2017 are very close to those for 2008 at both stations, with slight variation in the intermittent decade. For the monitoring station with higher ambient $PM_{2.5}$ concentrations (Calexico), it is important to note the decrease in recent years. In 2014, the annual average concentration at the Calexico monitor was 13.8 µg/m³. By 2016, the annual average concentration at Calexico had decreased 10 percent to 12.5 µg/m³. Additionally, although El Centro's annual average concentration did increase in between 2015 and 2017 from 6.6 µg/m³ to 8.1 µg/m³, respectively, it was still under the NAAQS.[21] $PM_{2.5}$ emissions at Calexico are impacted by the transport of pollution over the border from Mexicali. Emission sources that contribute to the $PM_{2.5}$ concentrations at Calexico include traffic emissions within the Calexico/Mexicali border area, electrical generation, other industrial sources, unpaved roads, and cultural practices such as bonfires and fireworks. Elevated $PM_{2.5}$ concentrations in this region occur most frequently during the winter months when winds are stagnant.[22]

[21] The design value for the annual $PM_{2.5}$ NAAQS is computed as the annual mean of $PM_{2.5}$ concentrations measured at the monitor, averaged over 3 years. The 2015 design value shown in the plot is 12.9 µg/m³ and does not include data from the Special Purpose Monitor (SPM) that was included in 2015 at Calexico. USEPA's Air Quality System (AQS) includes data from the SPM in quarters 1 and 4 of 2015, which results in a design value of 13.1 µg/m³.

[22] ICAPCD. 2018. Imperial County 2018 Annual Particulate Matter Less Than 2.5 Microns in Diameter State Implementation Plan. Available at: https://www.co.imperial.ca.us/AirPollution/otherpdfs/2018-IC-PM25SIP.pdf. Accessed: March 2019.

Figure 3.5. Comparison of 24-hour PM_{10} Concentration Measurements at the Calexico Monitoring Station to the NAAQS

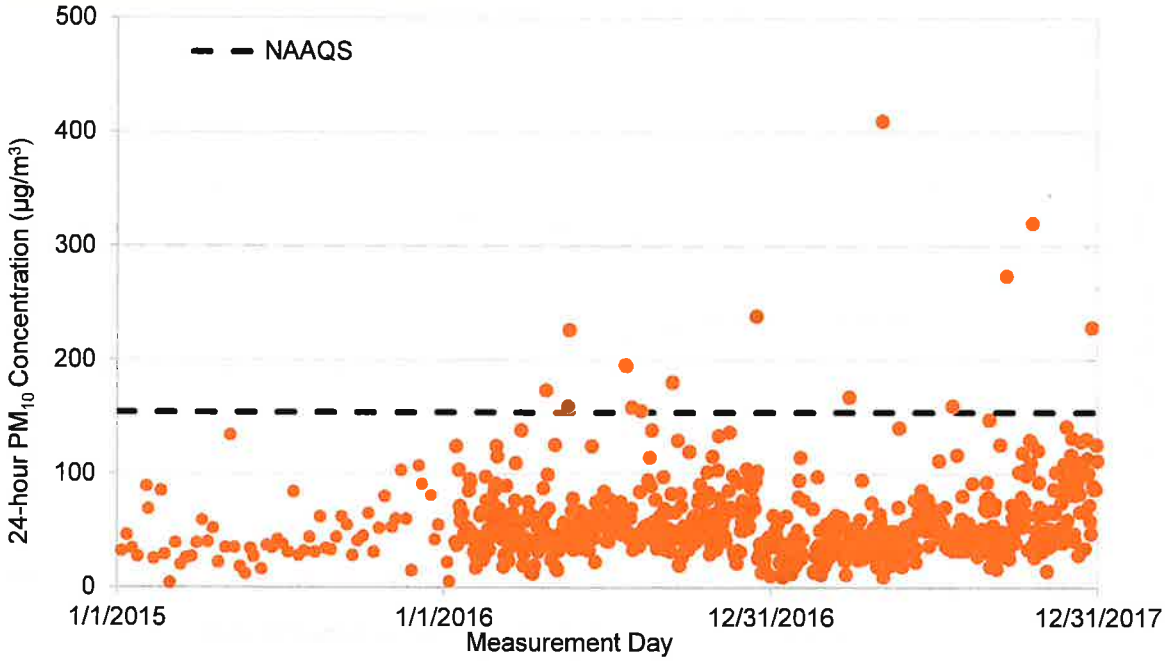
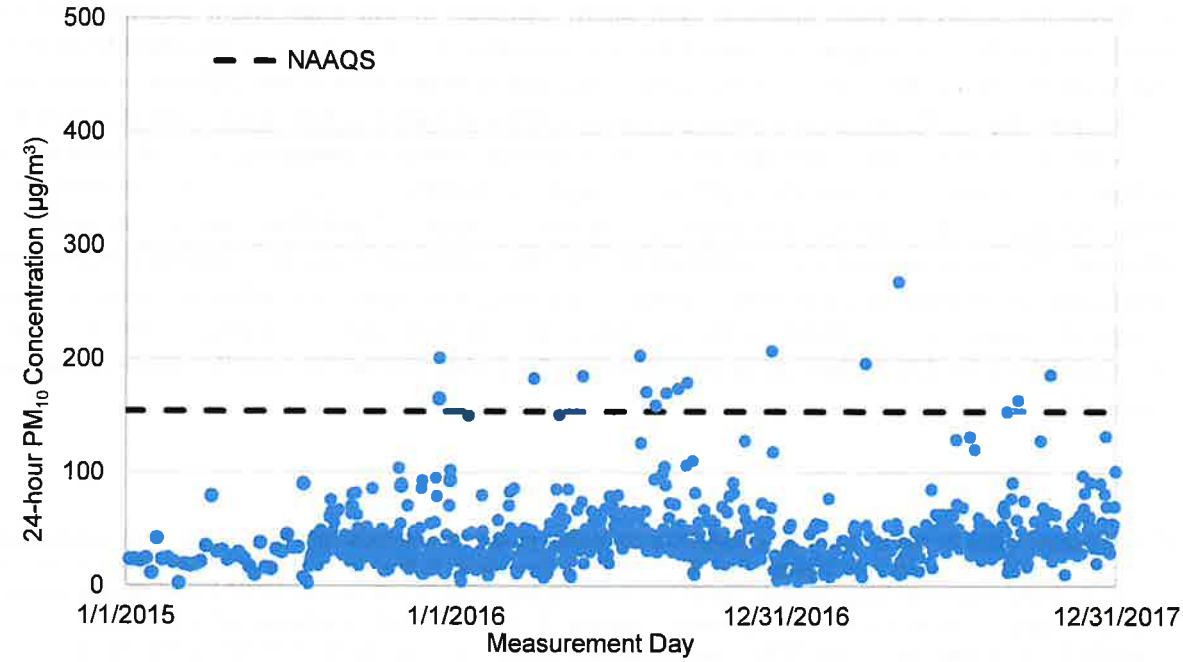


Figure 3.6. Comparison of 24-hour PM_{10} Concentration Measurements at the El Centro Monitoring Station to the NAAQS



Figures 3.5 and 3.6 present PM_{10} monitoring data collected at the Calexico and El Centro monitoring stations, respectively. Because the NAAQS for PM_{10} is evaluated based on daily 24-hour time-averaged measurements,[23] the plots display data points for each 24-hour measurement collected at the sites from 2015 to 2017. The data shows that on most days, PM_{10} levels are well below the 150 $\mu g/m^3$ standard. However, the NAAQS is still exceeded somewhat regularly. As discussed in the 2018 PM_{10} Plan for Imperial County, these exceedances are attributed to occurrences of high wind activity during exceptional events.[24]

Community Monitoring

The IVAN network is a collection of 40 air quality sensors located throughout the Imperial Valley, nine of which are located within the El Centro-Heber-Calexico Corridor, plus an additional three which are located adjacent to the Corridor.[25] The network was developed and is managed by CCV, the California Environmental Health Tracking Program, and the University of Washington School of Public Health. The sensors began collecting data in September 2016 and currently monitor for particulate matter. The collected data is reported in real time to a website that can be viewed by community members directly. The data is also used to calculate community air quality levels (CALs), which describe current air quality and provide health recommendations to the community. Currently, the data from the IVAN network cannot be used to determine attainment status or other air quality requirements.

Monitoring data from a subset of the IVAN community monitors within the Corridor are presented in Figures 3.7 through 3.9.

[23] The 24-hour PM_{10} NAAQS is 150 $\mu g/m^3$, which is not to be exceeded more than once per year on average over three years. Measurements for this metric are customarily rounded to the nearest 10 $\mu g/m^3$. Hence, the NAAQS in Figures 3.5 and 3.6 is shown at 154 $\mu g/m^3$ as any measurement below this value rounds down to 150 and thus would not exceed the standard.

[24] ICAPCD. 2018. Imperial County 2018 Redesignation Request and Maintenance Plan for Particulate Matter Less Than 10 Microns in Diameter. Available at: https://www.arb.ca.gov/planning/sip/planarea/imperial/sip.pdf. Accessed: May 2019.

[25] Additional information on the IVAN network can be found at: https://ivanonline.org/. Accessed: May 2019.

Figure 3.7. PM_{10} and $PM_{2.5}$ Monitoring Data from the Calexico-Alvarez Community Monitor

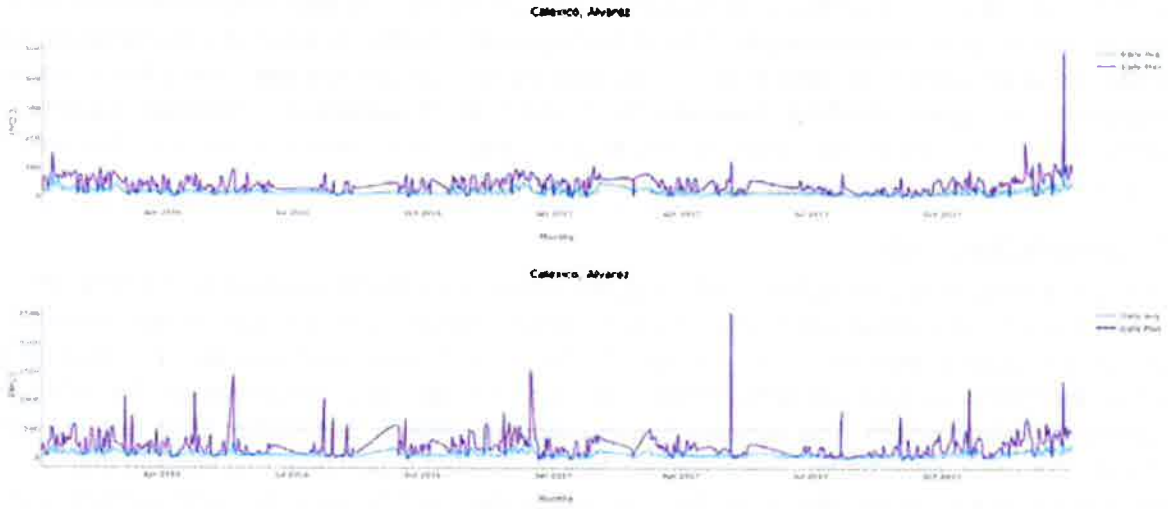


Figure 3.8. PM_{10} and $PM_{2.5}$ Monitoring Data from the El Centro-Wilson Community Monitor

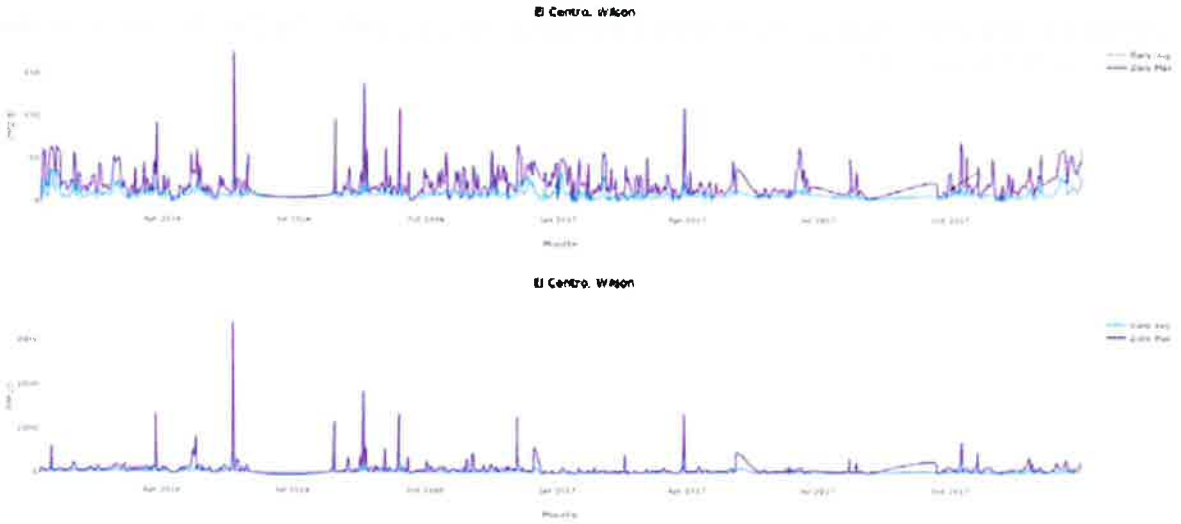
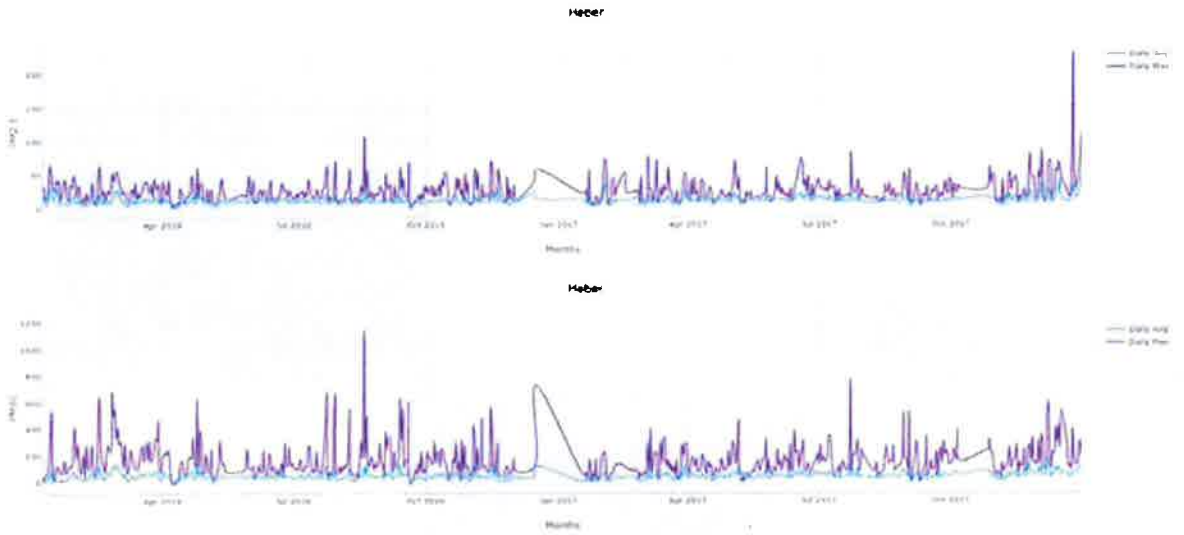


Figure 3.9. PM_{10} and $PM_{2.5}$ Monitoring Data from the Heber Community Monitor



Air Pollution Burden

Air pollution burden can be used to evaluate the relative impact of pollution sources and emission levels within a community, which is one of the metrics for evaluating cumulative exposure burden. CES3 evaluates seven pollution burden exposure indicators and five pollution burden environmental effects indicators. Air quality-related CES3 indicators that are relevant to the Corridor include O_3, $PM_{2.5}$, DPM, pesticide use, and toxic releases from facilities. The O_3 and $PM_{2.5}$ indicators are based on existing data from the CARB air monitoring network. The DPM indicator is based on modeled mobile source emissions data from CARB and the San Diego Association of Governments. The pesticide use and toxic release indicators are based on values reported by industrial and agricultural facilities.[26] Together, these indicators provide useful information on the existing air quality cumulative exposure burden in a given area.

Figure 3.10 presents the burden percentile for each of the air quality-related indicators, as well as the average of these indicators (i.e., "pollution burden") as compared to the state of California. As seen in this figure, the average pollution burden is highest near Calexico. Exceptions to this are pesticide use, which is highest in the agricultural areas of Imperial County. Toxic release burden is below the 50th percentile for all census tracts in Imperial County.

Figure 3.11 presents the burden percentiles as compared to the census tracts in Imperial County. This figure shows a similar trend to the statewide percentiles, indicating that most of the pollution burden in the County is concentrated close to the US-Mexico border. A few sources that demonstrate elevated burden away from the border include DPM within the city of El Centro and pesticide use in the agricultural areas. In addition, the O_3 burden is above the 90th percentile in El Centro and Heber and lower in surrounding areas. However, O_3 is created through secondary formation from NO_X and VOC and can show up in areas that are not necessarily in the location of

[26] OEHHA. 2018. CalEnviroScreen 3.0. Available at: https://oehha.ca.gov/calenviroscreen/report/calenviroscreen-30. Accessed: May 2019.

the source. Therefore, O_3 emissions could be influenced by sources south of the US-Mexico border.

Figure 3.10. CES3 Statewide Burden Percentiles for Air Quality-Related Indicators

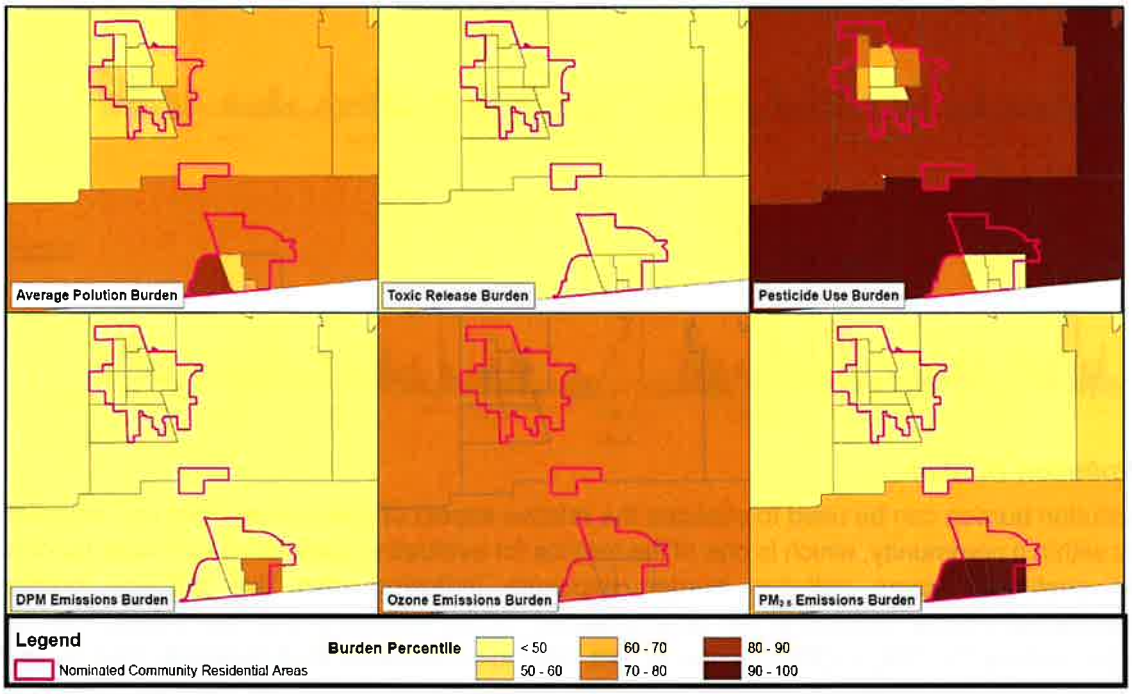


Figure 3.11. CES3 Countywide Burden Percentiles for Air Quality-Related Indicators

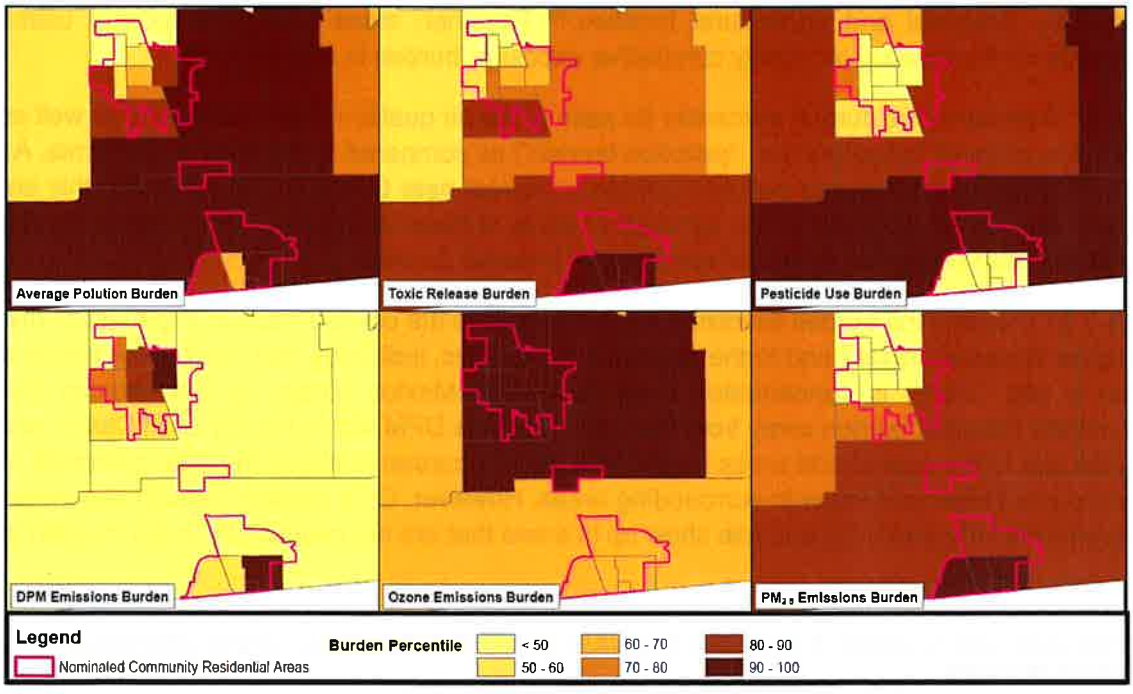


Table 3.2 summarizes the range and average indicator percentile for census tracts within the El Centro-Heber-Calexico Corridor. As shown in Table 3.2, the high end of the indicator range is greater than the 75th percentile for all indicators except for drinking water and toxic releases from facilities.

Table 3.2. CES3 Statewide Burden Percentiles for Census Tracts within the El Centro-Heber-Calexico Corridor

Indicator		Indicator Percentile	
		Range	Average
Pollution Burden: Exposures	Ozone	73.9 - 77.9	76.4
	$PM_{2.5}$	17.8 - 94.7	43.5
	DPM	6.4 - 78.0	29.2
	Pesticide use	61.2 - 90.3	79.3
	Traffic	16.2 - 92.6	43.6
	Drinking water	25.6 - 48.0	31.6
	Toxic releases from facilities	13.0 - 49.4	37.3
Pollution Burden: Environmental Effects	Solid waste sites and facilities	10.1 - 98.7	62.8
	Cleanup sites	2.0 - 90.5	34.6
	Groundwater threats	8.9 - 92.8	47.0
	Impaired water bodies	71.6 - 99.4	83.7
	Hazardous waste generators and facilities	43.1 - 94.9	72.7

Notes:

[a] Indicator percentiles obtained from CalEnviroScreen 3.0 for census tracts 6025011100, 6025011201, 6025011202, 6025011300, 6025011400, 6025011500, 6025011600, 6025011700, 6025011801, 6025011802, 6025011803, 6025011900, 6025012001, 6025012002, 6025012100, and 6025012200. Available at: https://oehha.ca.gov/calenviroscreen/report/calenviroscreen-30. Accessed: May 2019.

3.2.1.2 Key Air Pollutants and Associated Sources

The economy in Imperial County is predominantly tied to agriculture. Agricultural operations can result in emissions from land management activities (e.g., tilling, burning), concentrated animal feeding operations (CAFOs), off-road equipment (e.g., tractors and pumps), on-road vehicles, and unpaved roads. In addition to the agricultural economy, Imperial County also has industrial energy sources and a significant amount of off-highway vehicle (OHV) activity in the outlying desert. Due to its proximity to the international border, there is also a large amount of emissions associated with vehicles idling at and traveling through the international ports-of-entry.

In addition to anthropogenic (i.e., "human caused") activities, the area is also susceptible to high wind events, which can lead to elevated concentrations of particulate matter. Table 3.3 below summarizes the types of air pollutants generally associated with the sources discussed. A more thorough discussion of the emissions within the Corridor specifically in the context of an emission inventory is provided in Section 3.2.2.

Table 3.3. Examples of Key Emission Sources in Imperial County and Associated Pollutants

Emissions Source	Associated Pollutants
Agricultural Activities (tilling)	PM_{10}, $PM_{2.5}$
Agricultural Activities (burning)	$PM_{2.5}$
Concentrated Animal Feeding Operations	PM_{10}, $PM_{2.5}$, methane (CH_4), ammonia (NH_3)
Off-Road Equipment	Combustion By-products[a]
On-Road Vehicles	Combustion By-products[a]
Unpaved Roads	PM_{10}, $PM_{2.5}$
Industrial Energy Production	Combustion By-products[a]
Off-Highway Vehicles	PM_{10}, $PM_{2.5}$
Regional Wind Events	PM_{10}, $PM_{2.5}$

Notes:

[a] Combustion by-products will vary by fuel type but will generally include carbon dioxide, carbon monoxide, sulfur dioxide, nitrogen oxides, particulate matter, and toxics.

3.2.2 Community-Level Emissions Inventory

[TEXT – OVERVIEW OF THE PURPOSE OF A COMMUNITY-LEVEL EMISSIONS INVENTORY AND POLLUTANTS EVALUATED]

[TEXT – OVERVIEW OF THE APPROACH FOR CREATING THE COMMUNITY-LEVEL EMISSIONS INVENTORY; REFERS READER TO APPENDIX D-COMMUNITY-LEVEL METHODOLOGY]

[TABLE(S) – SUMMARY TABLES OF COMMUNITY-LEVEL EMISSION INVENTORIES – NO_X, VOC, $PM_{2.5}$, PM_{10}, KEY INDIVIDUAL TOXICS]

3.2.3 Source Attribution Analysis

3.2.3.1 Previous Analyses

The purpose of a source attribution analysis is to assess, identify, and estimate the relative contribution of sources or categories of sources to elevated exposures of air pollution in a community. It can be used to aid in the development of emission reduction targets and strategies and differentiate between pollution originating from sources within a community versus those

attributable to regional sources (i.e., background pollution). Source attribution can be performed using a variety of technical approaches, including: community inventory ratios, community-specific air quality modeling, targeted air monitoring/back trajectory/pollution roses/inverse modeling, chemical mass balance, and Positive Matrix Factorization (PMF).

Certain technical analyses conducted for the ICAPCD 2018 SIP for the Annual $PM_{2.5}$ NAAQS involved a type of source apportionment analysis.[27] Those analyses were conducted as part of the Clean Air Act Part D Subpart 179(B) Technical Demonstration which showed that the implementation plan would be adequate to attain and maintain the NAAQS but for transport of emissions from Mexico. Specifically, the technical demonstration included an evaluation of the impact of Mexicali emissions on the Calexico $PM_{2.5}$ monitor through an evaluation of monitoring data, meteorological conditions, and emissions in the border region. Additionally, CARB staff analyzed speciated particulate matter data and conducted a source apportionment analysis using PMF.

Elemental species concentrations were compared at the three $PM_{2.5}$ monitoring sites in Imperial County: the Brawley site (~22 miles north of the border), the El Centro site (~9 miles north of the border), and the Calexico site. Sample analysis from the monitor located in Calexico indicates that PM is comprised primarily of carbonaceous aerosols (organic matter plus elemental carbon) (45%), geological material (21%), ammonium nitrate (13%), ammonium sulfate (14%), and elemental species (7%). Results from X-Ray fluorescence analyses performed at all three sites indicated that elemental species concentrations increased with proximity to the border. Concentrations of non-geological elemental species were 4 and 6 times lower at the El Centro and Brawley sites, respectively, than at Calexico indicating that circumstances unique to Calexico make a significant contribution to the elemental species concentrations. Activities known to occur in the Mexicali area, including a substantial number of manufacturing and assembly plants (maquiladoras), small-scale brickyards, and uncontrolled combustion of refuse and other materials, suggest that the unusually high measurements of $PM_{2.5}$ elemental species in Calexico are likely due to transport from Mexicali.

The source apportionment analysis included data from the Calexico monitor from 2011 and between September 2014 and August 2015.[28] PMF identified seven major sources of $PM_{2.5}$ in Calexico: airborne soil (24%), biomass burning (19%), mobile (16%), secondary sulfate (15%), secondary nitrate (11%), refuse burning (11%), and industrial sources (4%). Airborne soil contributed the highest levels in spring and fall quarters when average wind speeds are seasonally elevated. High values of biomass burning were measured in the winter and summer months, indicating a strong influence of burning for space heating and field burning of crop residues, respectively. The analysis noted higher contributions of refuse burning in the winter, consistent with wintertime bonfires. Lastly, the measured contributions from industry exhibited elevated concentrations of iron, lead, and zinc. Potential sources of these metals were identified

[27] ICAPCD. 2018. Imperial County 2018 Annual Particulate Matter Less Than 2.5 Microns in Diameter State Implementation Plan. Available at: https://www.co.imperial.ca.us/AirPollution/otherpdfs/2018-IC-PM25SIP.pdf. Accessed: March 2019.

[28] Data from the intervening periods was determined to be invalid.

in Mexicali, including metal processing operations, brick kilns, cement kilns, and various incinerators.

As discussed above, in the source apportionment analysis biomass burning was found to be the second largest contributor to $PM_{2.5}$ at the Calexico monitor. CARB's analysis suggests that bans on biomass burning in quarters 2 and 4 would be slightly more effective in reducing ambient $PM_{2.5}$ concentrations than restrictions solely applied in the winter season. Additionally, source direction analyses showed that $PM_{2.5}$ contributions from mobile sources and secondary nitrate precursor emissions had strong southwest source directionality suggesting contributions from the Calexico West Port-of-Entry. CARB's analysis suggests that reduction or elimination of idling times in the winter has the potential to reduce the $PM_{2.5}$ emissions below the annual $PM_{2.5}$ standard of 12.0 $\mu g/m^3$.

Ultimately, the evaluation concluded that 15 percent of the $PM_{2.5}$ in Calexico was contributed by sources that are not found in Imperial County (i.e. refuse burning and certain industrial sources), and that most of the $PM_{2.5}$ from mobile and secondary nitrate sources originated from the United States-Mexico border crossing area.

3.2.3.2 Community Inventory Ratios

[DISCUSSION OF THE COMMUNITY-LEVEL INVENTORY IN THE CONTEXT OF SOURCE APPORTIONMENT; WHERE DOES IT LINE UP WITH CARB'S ANALYSES? WHERE DOES IT DIFFER?]

3.2.4 Existing Air Quality Policies and Programs

3.2.4.1 County Policies and Programs

The Clean Air Act, established by the USEPA in 1970, regulates air emissions from stationary and mobile sources. Among other things, it allows the USEPA to establish the NAAQS and directs states to develop state implementation plans to attain and maintain the NAAQS. CARB, in turn, delegates some of this authority to local air districts, such as ICAPCD. California Health and Safety Code (HSC) Section 39002 states that local and regional authorities have the primary responsibility for control of air pollution from all sources other than vehicular sources. This includes the responsibility for permitting, enforcement, collection of emission inventory data, and preparation of air quality plans. In line with its delegated authority, ICAPCD staff has developed internal policies, programs, and rules to reduce air pollution from sources within its jurisdiction. This section discusses the key programs and policies administered by the District that directly impact the air quality in the region and, by extension, the Corridor.

Incentive Programs

Carl Moyer Program

ICAPCD currently administers the Carl Moyer Program[29] within Imperial County. The purpose of the Carl Moyer Program is to obtain emission reductions of NO_X, PM_{10}, and reactive organic gases

[29] More information available at: https://www.co.imperial.ca.us/AirPollution/index.asp?fileinc=plancarl. Accessed: March 2019.

(ROG) from heavy-duty vehicles and other equipment operating in California as early and as cost-effectively as possible. The Carl Moyer Program provides financial incentives to assist in the purchase of cleaner-than-required engine and equipment technologies to achieve emission reductions that are real, quantifiable, and enforceable. ICAPCD makes grants available to qualified applicants. Eligible projects include purchasing cleaner on-road trucks, school and transit buses, off-road equipment, agricultural equipment, and lawn mowers. The Carl Moyer Program has been implemented in ICAPCD for the past 15 years. Most recently, the program has been funding the replacement of agricultural equipment, including tractors and hay loaders at a rate of 4 to 6 pieces of equipment per year.

Table 3.4 presents the 2016, 2017, and 2018 emission reductions resulting from this program.

Table 3.4. Imperial County Emission Reductions from Carl Moyer Program Projects

	NO_x (tpy)	ROG (tpy)	PM (tpy)
2016			
2017			
2018			

Funding Agricultural Replacement Measures for Emission Reductions (FARMER) Program

ICAPCD currently administers the FARMER Program[30] within Imperial County. The FARMER program provides funding through local air districts for agricultural harvesting equipment, heavy-duty trucks, agricultural pump engines, tractors, and other equipment used in agricultural operations, including zero-emission agricultural utility task vehicles. The purpose of the program is to reduce agricultural sector emissions by providing grants, rebates, and other financial incentives to replace agricultural operation equipment with cleaner alternatives. The program began in 2017 and provided ICAPCD an initial funding allocation of approximately $1.2 million. ICAPCD has received additional funding of approximately $1.1 million for 2019. Under the currently awarded amounts, ICAPCD estimates that 11 to 13 agricultural trucks and tractors will be replaced through the program each year. The District is currently working on six active projects.

Table 3.5 presents the estimated emission reductions expected from the first six projects.

Table 3.5. Imperial County Estimated Emission Reductions from current FARMER Program Projects

Project Type	NOx (tpy)	ROG (tpy)	PM_{10} (tpy)	$PM_{2.5}$ (tpy)
On-Road Heavy-Duty AG Truck (New)	0.2177	0.0147	0.0074	0.0068
On-Road Heavy-Duty AG Truck (New)	0.1019	0.0057	0.0031	0.0028
On-Road Heavy-Duty AG Truck (New)	0.1692	0.0112	0.0054	0.005

[30] More information available at: https://ww2.arb.ca.gov/our-work/programs/farmer-program. Accessed May 2019.

On-Road Heavy-Duty AG Truck (New)	0.0334	0.0019	0.0019	0.0018
Off-Road Agricultural Equipment (Tractor, New)	0.6835	0.0419	0.0207	0.019
Off-Road Agricultural Equipment (Tractor, New)	0.9733	0.0496	0.0254	0.0234
Total	2.179	0.125	0.0639	0.0588

Lawn Equipment Exchange Program

ICAPCD has been administering the Lawn Equipment Exchange Program for the past 4 years. The program reduces air pollution by allowing residents to exchange working gasoline-powered lawn mowers and lawn equipment with zero-emission electric-powered units at a discounted price. Since inception, ICAPCD has exchanged more than 237 lawn mowers, and 140 leaf blowers and trimmers. This has resulted in average emission reductions of 101 pounds of hydrocarbons and 830 pounds of carbon dioxide.[31]

State Reserve Funding

The 2018 State Reserve Project Solicitation[32] is directed at providing monetary grants to offset the incremental cost of off-road reduced emission technologies. Under the 2017 guidelines, mobile, portable, and stationary off-road compression ignition and large spark-ignition projects such as construction, agricultural, and industrial equipment are eligible for funding. ICAPCD recently used these funds to replace commercial-sized lawn mowers at Southwest High School and Central Union High School, both located within the Corridor.

Table 3.6 presents the emission reductions resulting from this program.

Table 3.6. Imperial County Emission Reductions from State Reserve Funding

	NOx	ROG	PM
Emission Reductions (tons/yr)	0.02	0.02	0.08

NOx Remediation Measures

CARB's Low Carbon Fuel Standard (LCFS) was originally adopted in 2009 and targets reductions in greenhouse gases through reduction of the carbon intensity of transportation fuels in California. In implementing the LCFS, CARB identified that the use of biomass-based diesel fuel may have resulted in increased NOx emissions. CARB committed to remediate potential increases in NOx emissions through a Voluntary NOx Remediation Measure (NRM) grant program. The ICAPCD was awarded a grant under this program to fund clean vehicle and equipment projects for immediate emission reductions in disadvantaged and low-income communities. The mission of the NRM grant, is to promote and protect public health and welfare through the effective and

[31] More information available at: https://imperial.granicus.com/MetaViewer.php?view_id=2&clip_id=1470&meta_id=231617. Accessed: May 2019.
[32] More information available at: https://www.arb.ca.gov/msprog/moyer/statereserve.htm. Accessed: May 2019.

efficient reduction of air pollutants and the NRM must achieve NOx emission reductions that are permanent, surplus, and quantifiable. ICAPCD is using the funds provided by this grant to replace a school bus in Heber.

Table 3.7 presents the emission reductions resulting from this program.

Table 3.7. Imperial County Emission Reductions from NOx Remediation Measures

	NOx	ROG	PM
Emission Reductions (tons/yr)	0.57	0.01	0.23

Proposition 1B – Goods Movement Emission Reduction Program (GMERP)

Proposition 1B, GMERP, is a partnership between CARB and local agencies, including air districts and seaports to reduce air pollution emissions and health risks from diesel exhaust that are created by freight movement along California's trade corridors. Imperial County is within the San Diego/Border Trade Corridor.[33] Currently San Diego Air Pollution Control District is administering the program on behalf of the District.[34]

This program has been in effect in ICAPCD for four funding cycles, starting in 2010. Table 3.8 presents the number of trucks that have been replaced or retrofitted under this program, along with resulting emission reductions. Note that these are mobile emissions, and as such emission reductions may not occur entirely in Imperial County.

Table 3.8. Imperial County Emission Reductions from GMERP

	Trucks replaced	Trucks retrofitted	Emission Reductions (tons)[a]	
			PM_{10}	NOx
Year 1 Funds	51	0	11.5	214.6
Year 2 & 3 Funds	147	24	32.9	780.7
Year 4 Funds	106	0	4.1	512.9
Total	304	24	48.5	1,508.2

Notes:

[a] Emission reduction estimates are based on a five-year project lifespan.

[33] More information available at: https://www.arb.ca.gov/bonds/gmbond/gmbond.htm. Accessed: May 2019.
[34] More information available at: https://www.sdapcd.org/content/sdc/apcd/en/grants-and-incentives/proposition-1b-goods-movement-emission-reduction-program--gmerp-.html. Accessed: May 2019.

Additional Incentive Programs

The following incentive programs have been considered by the District or implemented in the past, but are not being currently implemented:

- Lower-Emission School Bus Program. This CARB program provides grant funding for new lower-emission school buses, as well as retrofit equipment for school buses. The program was administered by ICAPCD in 2008 and 2009, during which time the District retrofitted 54 and replaced 13 school buses in the County. The District is currently considering options for using this program in the future.[35]
- Woodsmoke Reduction Program. The Woodsmoke Reduction Program is administered by CARB and offers financial incentives for homeowners to replace wood stoves, wood inserts, or fireplaces with cleaner burning, more energy efficient devices.[36] ICAPCD has not yet participated in this program, but anticipates doing so in the future.

Non-Incentive Programs

Smoke Management Program

California HSC Section 41850 authorizes local air districts to reasonably regulate, but not prohibit agricultural burning. Furthermore, California HSC Section 41856 required CARB to develop guidelines for the regulation and control of agricultural burning for each air basin in the state. Title 17 of the California Code of Regulations ("Title 17") was developed to provide smoke management guidelines for agricultural and prescribed burning. Under Title 17, ICAPCD developed a Smoke Management Program (SMP), which addresses the relevant agricultural burning regulations, as well as applicable ICAPCD policies.[37] The objective of the SMP is to employ smoke management techniques on all agricultural burning projects to prevent smoke impacts to communities and sensitive receptors in Imperial County. The SMP identifies ICAPCD smoke management and forecasting resources, and procedures for burn registration, smoke management planning, and obtaining burn permits. It also provides guidelines for consideration of smoke sensitive areas and alternatives/incentives for not burning.

ICAPCD submits an annual burn report to CARB, in compliance with Title 17 Section 80130. The report includes the amount and type of crops burned during the previous calendar year. These reports indicate that there have been significant reductions in burning since 2003 in Imperial County. In fact, ICAPCD has reduced burning from 40,221 acres in 2003 to 12,767 acres in 2018, representing a 68 percent reduction in total acres burned.[38] Part of this success can be attributed to farmers utilizing the Agricultural Burning Emission Reduction Credit (ABERC) program instead of burning fields. As shown in Figures 3.12 and 3.13, since 2015, the number of acres participating in the ABERC program has been larger than the number of acres burned.

[35] More information available at: https://www.arb.ca.gov/msprog/schoolbus/schoolbus.htm. Accessed: May 2019.
[36] More information available at: https://www.arb.ca.gov/planning/sip/woodsmoke/reduction_program.htm. Accessed: May 2019.
[37] More information available at: https://www.arb.ca.gov/smp/district/imp2010.pdf. Accessed: May 2019
[38] Agricultural Acres Burned in Imperial County 2003-2018: https://www.co.imperial.ca.us/AirPollution/index.asp. Accessed: April 2019.

Figure 3.12. Agricultural Acres Burned in Imperial County, 2003-2018

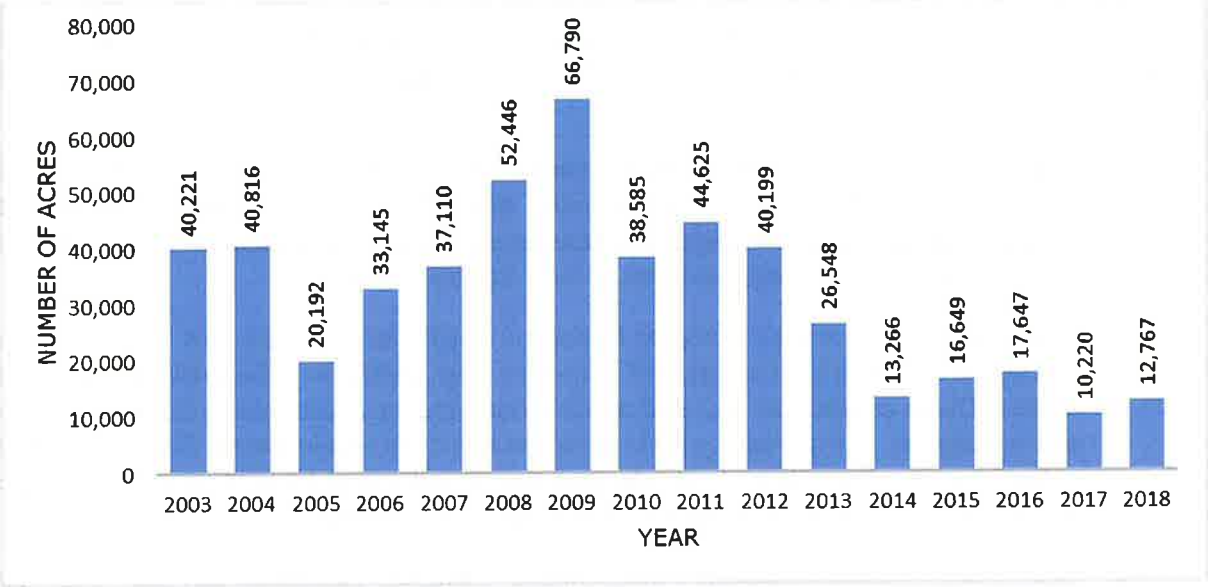
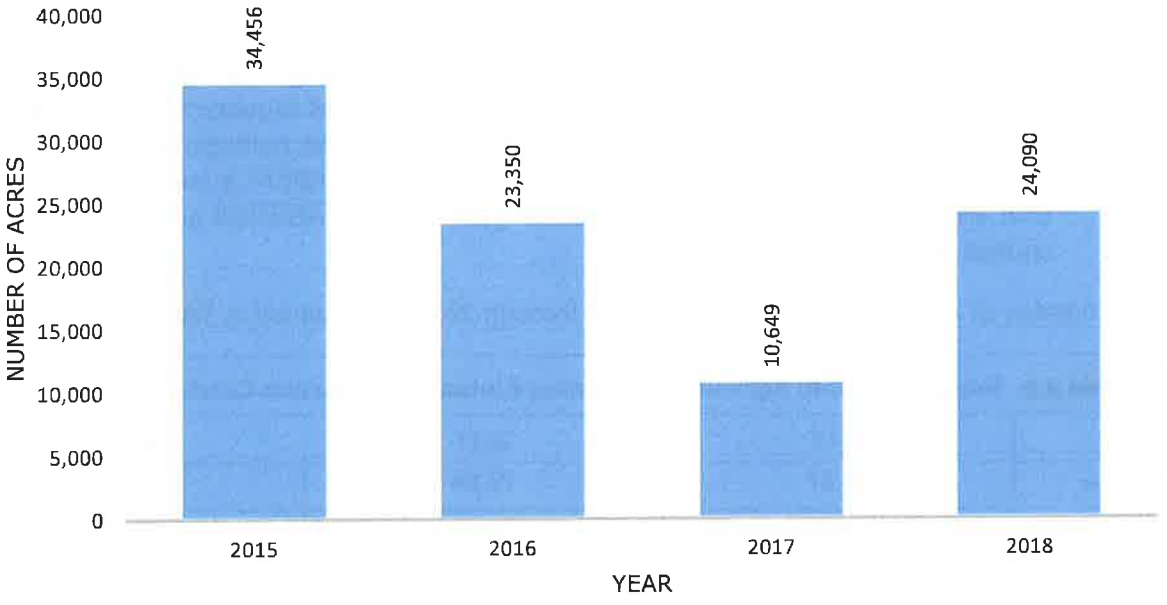


Figure 3.13. Agricultural Acres Not Burned in Imperial County and Participating in ABERC Program, 2014-2018



Emission Reduction Credit (ERC) Program

An ERC is a credit earned by an entity when it reduces its emissions beyond what is required by regulation. That credit is an asset that can be used by the creating entity or sold to other entities that need to offset their emissions. The ICAPCD ERC Program is implemented through the following rules:

- *Rule 214, Emission Reduction Credit Banking*. This rule defines standards and practices to ensure that ERCs are real, permanent, quantifiable, enforceable, and surplus. It ensures that emission reductions are transferred through the District ERC bank for use as offsets that meet the requirements of New Source Review.
- *Rule 214.1, Mobile Source Emission Reduction Credit Banking*. Rule 214.1 establishes a procedure by which businesses and industries may create and use emission reduction credits. These credits may be used as stationary source offsets where allowed by rules and regulations, or may replace other emission reduction requirements. Eligible emission reduction strategies include an accelerated vehicle retirement program, and retrofitting of passenger cars, and light-, medium-, and heavy-duty vehicles.
- *Rule 214.2, Paving Unpaved Public Roads Emission Reduction Credits*. This rule provides a procedure for quantifying and certifying emission reductions for voluntary paving of unpaved public roads, and issuance of Paving Emission Reduction Credit (PERC) certificates. These PERC certificates may be issued to meet New Source Review offset requirements.
- *Rule 214.3, Agricultural Burning Emission Reduction Credit Bank*. This rule ensures that agricultural burning emission reductions are transferred through the ABERC bank. These credits may be used as permit offsets or for variance offset requirements. As shown in Figures 3.12 and 3.13 above, since 2015, the number of acres participating in the ABERC program has been larger than the number of acres burned. ABERCs are reduced in value over time, such that by the end of the fifth year after the ABERCs are generated, any unused amount will be zero.

The number of ABERCs generated from 2016 through 2018 is presented in Table 3.9.

Table 3.9. Imperial County Agricultural Burning Emission Reduction Credits Generated

	2016	2017	2018
PM_{10}	89.57	79.84	170.55
CO	804.20	713.04	1364.62
TOC	61.85	55.11	116.16
NOx	29.74	26.46	52.14

Rule 310, Operational Development Fee

The purpose of ICAPCD's *Rule 310, Operational Development Fee*, is to provide ICAPCD with a mechanism for mitigating emissions produced from the operation of new commercial and residential development projects. Project proponents may choose from three options: payment of a pre-determined project mitigation fee, development of an Alternative Emission Reduction Plan ("AER Plan") that reduces emissions associated with operation (which reduces fees based on partial or full mitigation of emissions as demonstrated by the AER Plan), or request project-specific operational emission analysis to reduce the mitigation fees. The funds generated by the Operational Development Fees are distributed by ICAPCD for various mitigation projects.

There have been seven projects completed under this program. Four additional projects are currently in progress. Table 3.10 presents the emission reductions resulting from this program.

Table 3.10. Imperial County Emission Reductions from Rule 310 Projects

	Ozone (tpy)	PM (tpy)
Completed Projects	15.26	6.11
Projects in Progress	1.14	4.24

Policies

The District has an internal policy manual with a variety of policies that are mostly administrative in nature. However, some policies are centered on specific source types and serve to enhance existing District rules. These policies include:

- *Policy #8, Designation of Restricted and Prohibited Burning Areas*. This policy prohibits field burning and other large burns for areas within any city or townsite.
- *Policy #15, Burning of Residential Rubbish Restricted*. This policy ensures that residential rubbish burning is regulated similar to that of permitted burning, in compliance with existing District regulations, so that it will not constitute a nuisance.
- *Policy #21, Mitigation Measures for Fugitive Emissions from Access Roads to Subdivisions*. This policy enhances the requirements of Rule 805 by requiring that access roads leading to a single dwelling with a distance greater than 80 feet from any paved road have a gravel surface in order to control dust. Additionally, it requires that all access roads leading to housing developments of two or more dwellings be paved.
- *Policy #34, Agricultural Burning Procedures for Allocating Acreage, Burn Day Decisions, and Tracking*. This policy ensures that burn acreage is limited and that meteorological conditions are reviewed before allowing permitted burns.

- *Policy #38, Large Confined Animal Facilities Permits Required.* This policy requires Beef Feedlots and Dairies which meet the criteria for a Large Confined Animal Facility to develop an emission mitigation plan containing a number of measures as appropriate to each source category.

3.2.4.2 State Policies and Programs

Overview of California Air Resources Board's Statewide Actions

Community-scale air pollution exposure is caused by many factors, including the cumulative impacts from multiple pollution sources. Effective solutions require multiple strategies at both the statewide and local level to deliver new emissions reductions directly within these communities.

CARB has adopted a number of comprehensive air quality and climate plans over the last several years that lay out new emissions reduction strategies. These plans include the State Strategy for the State Implementation Plan,[39] the California Sustainable Freight Action Plan,[40] California's 2017 Climate Change Scoping Plan,[41] and the Short-Lived Climate Pollutants Reduction Strategy,[42] along with a suite of incentive programs. The CAPP Blueprint[43] further identified additional actions to reduce the air pollution burden in heavily impacted communities throughout the State. Together, these plans provide a foundation for the new actions identified as part of this Emission Reduction Plan.

This section illustrates CARB's statewide role in the Emission Reduction Plan, by broadly describing the regulatory, enforcement, and incentive-based actions CARB has taken to reduce emissions statewide. It also highlights specific foundational CARB actions that address areas of concern identified by the El Centro-Heber-Calexico Community.

Regulatory Programs

Federal, State, and local air quality agencies all work together to reduce emissions. At the federal level, the USEPA has primary authority to control emissions from certain mobile sources, including sources that are all or partly under federal jurisdiction (e.g., some farm and construction equipment, aircraft, marine vessels, locomotives), which it shares in some cases with air districts and CARB. The USEPA also establishes ambient air quality standards for some air pollutants.

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[39] California Air Resources Board, *Revised Proposed 2016 State Strategy for the State Implementation Plan*, March 7, 2017, available at: www.arb.ca.gov/planning/sip/sip.htm.

[40] California Department of Transportation, *California Sustainable Freight Action Plan*, July 2016, available at: http://www.dot.ca.gov/hq/tpp/offices/ogm/cs_freight_action_plan/theplan.html.

[41] California Air Resources Board, *California's 2017 Climate Change Scoping Plan*, November 2017, available at: www.arb.ca.gov/cc/scopingplan/scopingplan.htm.

[42] California Air Resources Board, *Short-Lived Climate Pollutant Reduction Strategy*, March 2017, available at: www.arb.ca.gov/cc/shortlived/shortlived.htm.

[43] California Air Resources Board, *Final Community Air Protection Blueprint for Selecting Communities, Preparing Community Emissions Reduction Programs, Identifying Statewide Strategies, and Conducting Community Air Monitoring*, October, 2018, available at: https://ww2.arb.ca.gov/our-work/programs/Community-Air-Protection-Program.

At the State level, CARB is responsible for controlling emissions from mobile sources and consumer products (except where federal law preempts CARB's authority), controlling toxic emissions from mobile and stationary sources, controlling greenhouse gases from mobile and stationary sources, developing fuel specifications, and coordinating State-level air quality planning strategies with other agencies.

Regionally, air districts are primarily responsible for controlling emissions from stationary and indirect sources (with the exception of consumer products in most cases) through rules and permitting programs within their regions.

CARB regulatory programs are designed to reduce emissions to protect public health, achieve air quality standards, reduce greenhouse gas emissions, and reduce exposure to toxic air contaminants. CARB establishes regulatory requirements for cleaner technologies (both zero and near-zero emissions) and their deployment into the fleet, for cleaner fuels, and to ensure in-use performance. CARB's regulatory programs are broad – impacting stationary sources, mobile sources, and multiple points within product supply chains from manufacturers to distributors, retailers, and end-users. CARB's regulations affect cars, trucks, ships, off-road equipment, consumer products, fuels, and stationary sources.

One important and relevant regulatory authority of CARB's is to adopt measures to reduce emissions of toxic air contaminants from mobile and non-mobile sources, known as Airborne Toxic Control Measures (ATCM).[44] These regulatory measures include process requirements, emissions limits, or technology requirements. Additionally, CARB implements the Statewide Air Toxics "Hot Spots" Program[45] to address the health risk from toxic air contaminants at individual facilities across the State. The Air Toxics "Hot Spots" Program includes several components to collect emissions data, identify facilities having localized impacts, ascertain health risks, notify nearby residents of significant risks, and reduce those significant risks to acceptable levels.

Under the Air Toxics "Hot Spots" Program, air districts are required to set a threshold for facilities that pose a significant health risk and prioritize facilities for health risk assessments. Air districts also establish a risk value above which facilities must conduct a risk reduction audit and emissions reduction plan. Facilities must develop these health risk assessments, risk reduction audits, and emission reduction plans. CARB provides technical guidance to support smaller businesses conducting health risk assessments and developing emissions reduction plans.

Additionally, CARB has pursued enforceable agreements with industry that result in voluntary but enforceable adoption of the cleanest technologies or practices and provide assurance that emissions reductions will be realized. CARB's agreement with the Union Pacific Railroad Company and BNSF Railway Company to accelerate introduction of cleaner locomotives in the South Coast Air Basin is an example of an enforceable agreement.

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[44] California Health and Safety Code § 39650 et seq.

[45] Assembly Bill 2588, Air Toxics "Hot Spots" Information and Assessment Act, Connelly, Statutes of 1987, California Health and Safety Code § 44300 et seq.

For more information on CARB's Air Toxics "Hot Spots" Program, visit: https://www.arb.ca.gov/ab2588/ab2588.htm. For more detailed information on CARB's statewide emissions reduction strategies, see Appendix C of the CAPP Blueprint at: https://ww2.arb.ca.gov/our-work/programs/community-air-protection-program.

Enforcement Programs

To achieve the reductions associated with rules and regulations, regulated entities must comply with requirements and technology must function as expected. CARB's goal, set out in more detail in statute and in its Enforcement Policy, is to achieve comprehensive compliance with every regulation the CARB Governing Board has adopted, and the Enforcement Program finds violations, investigates cases, and resolves cases through either the administrative settlement process, or litigation. CARB's enforcement efforts encompass a broad spectrum of programs, including certification requirements for vehicles, engines, aftermarket parts, consumer products, and fuels; in-use fleet requirements focused on diesel mobile sources; and greenhouse gas standards for stationary sources.

CARB settlement of enforcement cases can also fund Supplemental Environmental Projects, which are not otherwise required by law or regulation but benefit air quality by reducing emissions, reducing exposure to air pollution, or preventing future air quality violations. [46] Examples of Supplemental Environmental Projects include installation of air filtration systems in schools, increasing services to children with asthma, and school bus and diesel emissions reduction projects.

One critical and relevant enforcement program is CARB's continued effort to streamline the Truck and Bus Regulation enforcement process.[47] This work is closely linked to implementation of Senate Bill 1,[48] which ties truck registration in California to compliance with the Truck and Bus Regulation. Once fully implemented, CARB's Enforcement Program will identify potential violators through Department of Motor Vehicles' registrations, notify potential violators, give violators an opportunity to prove compliance, and finally place registration holds on all trucks that do not comply with the regulation. This process is expected to significantly improve the compliance rate with the Truck and Bus Regulation and improve air quality along trucking corridors in California.

For more detailed information on CARB's Enforcement Programs, visit: https://www.arb.ca.gov/enf/enf.htm.

Incentive Programs

CARB operates incentive programs that reduce the costs of developing, purchasing, or operating cleaner technologies. The programs help ensure cleaner cars, trucks, equipment, and facilities are operating in our neighborhoods by driving the development of new, cleaner technologies, and

[46] California Air Resources Board, Supplemental Environmental Project (SEP) Policy (Oct. 4, 2017) available at https://ww2.arb.ca.gov/resources/fact-sheets/supplemental-environmental-projects

[47] For more information on the Truck and Bus Regulation, visit: http://www.arb.ca.gov/msprog/onrdiesel/onrdiesel.htm.

[48] California Vehicle Code § 4000.15(a).

by accelerating their sale and adoption. Specifically, they accelerate the introduction of advanced technology vehicles and equipment, accelerate the turnover of older and higher emitting vehicles and equipment, and increase access to clean vehicles and transportation in disadvantaged communities and lower-income households.

Examples of CARB incentive programs include the Carl Moyer Memorial Air Quality Standards Attainment Program[49] (the Community Air Protection Incentives[50] are implemented by the air district through this program), Proposition 1B: Goods Movement Emission Reduction Program,[51] Funding Agricultural Replacement Measures for Emission Reductions (FARMER) Program,[52] and Low Carbon Transportation Investments and Air Quality Improvement Program (which includes the Hybrid and Zero-Emission Truck and Bus Voucher Incentive Project).[53] While CARB is responsible for program oversight, some of these programs are implemented as a partnership with local air districts.

For more information on air pollution incentives, grants, and credit programs, visit: https://www.arb.ca.gov/ba/fininfo.htm.

CARB Actions Related to the El Centro-Heber-Calexico Corridor

This section highlights CARB actions that specifically relate to the El Centro-Heber-Calexico Corridor. This list should not be interpreted as comprehensive or exhaustive, but rather illustrative of some of the major statewide strategies driving emissions reductions in conjunction with those local level strategies identified in this Emission Reduction Plan. The full list of CARB foundational strategies can be found in Appendix D and Appendix F of the CAPP Blueprint.[54]

Advanced Clean Trucks Regulation

CARB is working through a public process to develop and consider proposals for new approaches and strategies that may transition to zero emission technology those truck fleets that operate in urban centers, have stop and go driving cycles, and are centrally maintained and fueled. For more information on the proposed regulation, visit: https://ww2.arb.ca.gov/our-work/programs/advanced-clean-truck.

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[49] For more information on the Carl Moyer Memorial Air Quality Standards Attainment Program, visit: https://www.arb.ca.gov/msprog/moyer/moyer.htm.

[50] For more information on the Community Air Protection Incentives, visit: https://www.arb.ca.gov/msprog/cap/capfunds.htm

[51] For more information on the Proposition 1B: Goods Movement Emission Reduction Program, visit: https://www.arb.ca.gov/bonds/gmbond/gmbond.htm.

[52] For more information on the Funding Agricultural Replacement Measures for Emission Reductions Program, visit: https://ww2.arb.ca.gov/our-work/programs/farmer-program.

[53] For more information on the Low Carbon Transportation Investments and Air Quality Improvement Program, visit: https://ww2.arb.ca.gov/our-work/programs/low-carbon-transportation-investments-and-air-quality-improvement-program.

[54] California Air Resources Board, *Final Community Air Protection Blueprint for Selecting Communities, Preparing Community Emissions Reduction Programs, Identifying Statewide Strategies, and Conducting Community Air Monitoring*, October, 2018, available at: https://ww2.arb.ca.gov/our-work/programs/Community-Air-Protection-Program.

Heavy-Duty Vehicle Inspection and Maintenance

When emissions control systems are not operating correctly, in-use emissions can increase. CARB's current inspection programs include the roadside Heavy-Duty Vehicle Inspection Program and the fleet Periodic Smoke Inspection Program. These regulations require heavy-duty vehicles operating in California to be inspected for excessive smoke and tampering. In July 2018, CARB approved amendments to Heavy-Duty Vehicle Inspection Program and the Periodic Smoke Inspection Program to reduce the smoke opacity limits to levels more appropriate for today's modern engine technology. CARB is now exploring the development of a more comprehensive heavy-duty inspection and maintenance program which would help ensure all vehicle emissions control systems are adequately maintained throughout the vehicles' operating lives. For more information on existing heavy-duty maintenance programs, visit: https://www.arb.ca.gov/enf/hdvip/hdvip.htm. For more information on the development of a comprehensive heavy-duty inspection and maintenance program, visit: https://ww2.arb.ca.gov/our-work/programs/heavy-duty-inspection-and-maintenance-program.

Cross-Agency Engagement and Integration of Pesticide Application Information

The Department of Pesticide Regulation and the Imperial County Agricultural Commissioner's Office participated in the Imperial community steering committee process. CARB is also working directly with the Department of Pesticide Regulation to integrate pesticide information in the online Resource Center. For more information on the online Resource Center, visit: https://ww2.arb.ca.gov/our-work/programs/community-air-protection-program.

Reducing Emissions from Dairy and Other Livestock

As part of the Short-Lived Climate Pollutant Reduction Strategy, CARB, several lead State agencies, and other stakeholders will encourage and support near-term actions by dairies to reduce manure methane emissions through financial incentives, collaboration to overcome barriers, development of policies to encourage renewable natural gas production where appropriate as a pollution control strategy, and other market support. Enteric fermentation from all livestock is also responsible for methane emissions. CARB, along with other lead State agencies, will continue to support and monitor research and explore voluntary, incentive-based approaches to reduce enteric fermentation emissions from dairy and non-dairy livestock sectors until cost-effective and scientifically-proven methods to reducing these emissions are available and regulatory actions can be evaluated. For more information on the strategy, visit: https://www.arb.ca.gov/cc/shortlived/shortlived.htm.

3.2.5 Sensitive Receptors and Land Use Policy

Land use planning is essential for ensuring effective and efficient use of land resources. Land use policy regulates the types of land uses that can be established in certain areas and as a result, can aid in environmental conservation, reduce urban sprawl, and decrease the public's exposure to pollutants. The following sections identify the locations of sensitive receptors in the Corridor and provide an overview of the existing land use policies in Imperial County.

3.2.5.1 Identification of Sensitive Receptors

Sensitive receptors refer to those segments of the population most susceptible to impacts from air pollution emissions (e.g., children, the elderly, and people with pre-existing serious health problems affected by air quality).[55] Sensitive receptors include residential communities, public and private K-12 schools, public and private day care centers, convalescent homes and elderly residential facilities, hospitals and long-term care facilities, and parks and athletic facilities.

A search for non-residential sensitive receptors (such as daycare centers, schools, hospitals, and other care facilities) showed that there are at least 82 sensitive receptors within the Corridor (see Figure 3.14 and Appendix E). Non-residential sensitive receptor locations were identified based on searches of the following on-line public databases:

- California Community Care Licensing Division (https://secure.dss.ca.gov/CareFacilitySearch/DownloadData);
    - Residential Care Facilities for the Elderly
    - Child Care Centers
    - Adult Residential Facilities
- Homeland Infrastructure Foundation-Level Data (https://hifld-geoplatform.opendata.arcgis.com/search)
    - Private Schools
    - Public Schools
    - Hospitals
    - Child Care Facilities

To further validate the location of sensitive receptors, there was an exercise at the fourth Steering Committee meeting held on January 30, 2019 during which the Steering Committee members were asked to identify sources of concern and the location of sensitive receptors on maps of the Corridor (see Figure 3.15 for an example).

[55] CARB. 2005. Air Quality and Land Use Handbook: A Community Health Perspective. April. Accessed: https://www.arb.ca.gov/ch/handbook.pdf. Accessed: May 2019.

Figure 3.14. Sensitive Receptor Locations in the El Centro-Heber-Calexico Corridor

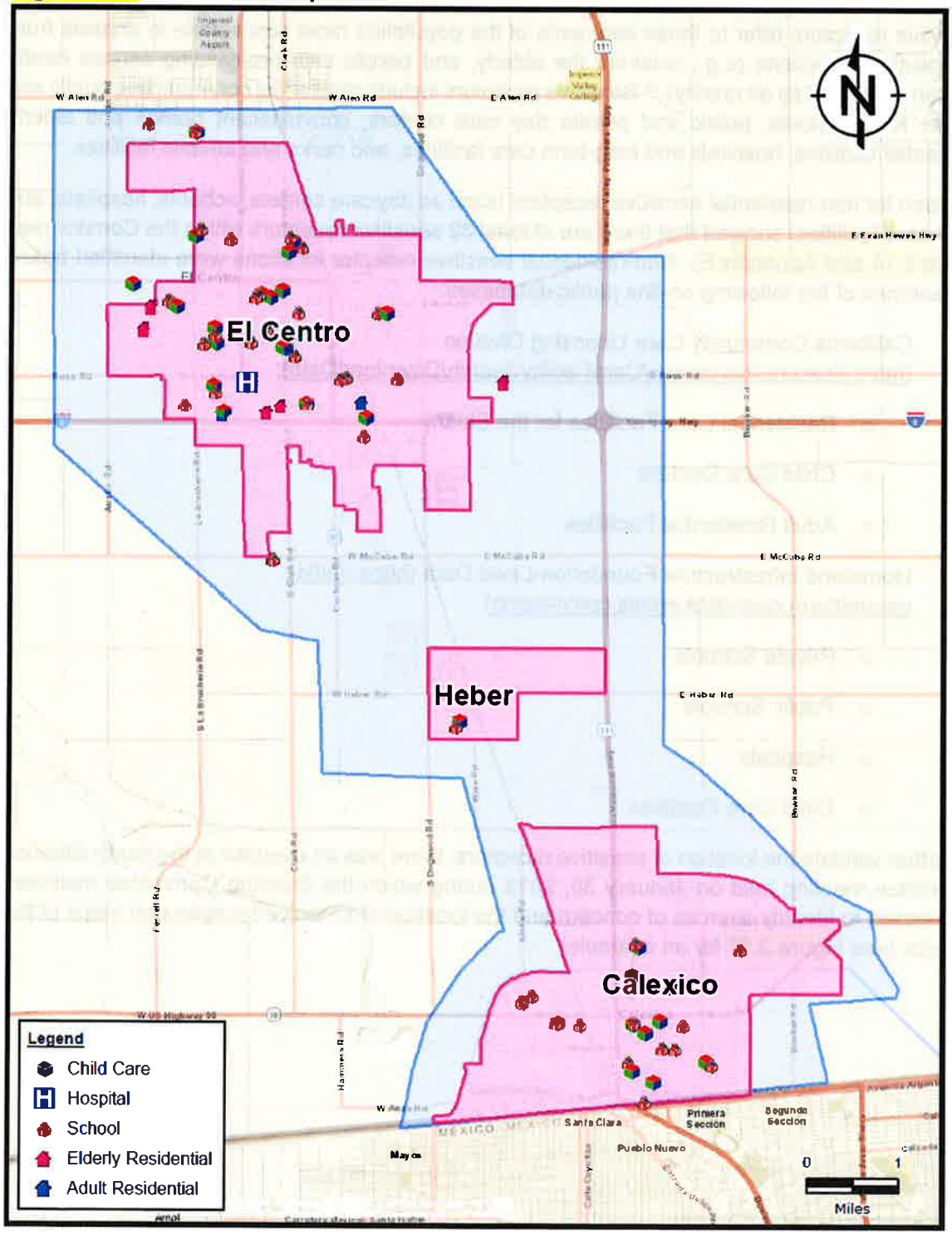
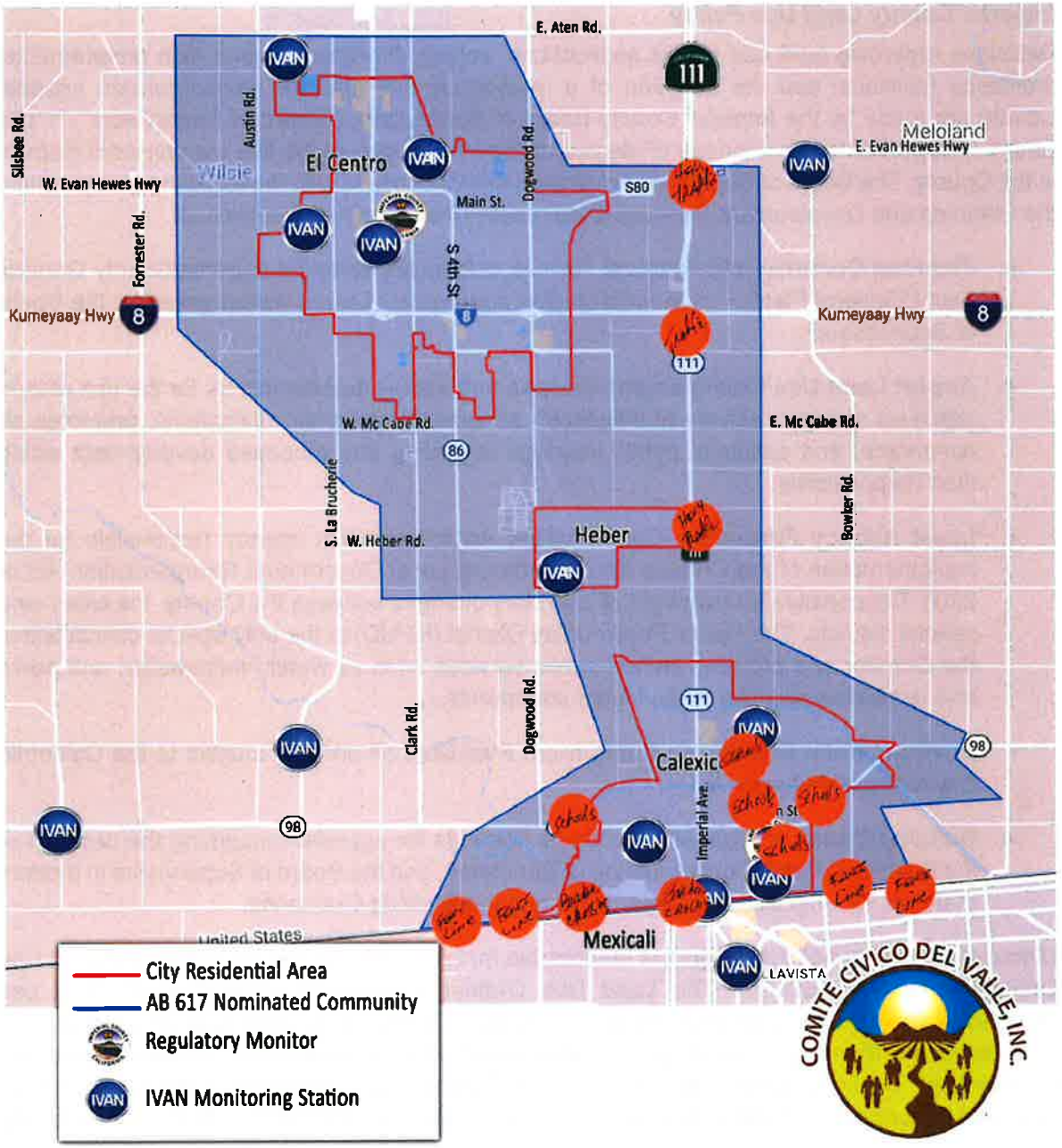


Figure 3.15. Source and Sensitive Receptor Locations Identified at Steering Committee Meeting



3.2.5.2 Overview of Existing Land Use Policy

Land use policy in the Corridor is managed by several entities including Imperial County, City of El Centro, and the City of Calexico. Imperial County is responsible for the unincorporated areas

of the County while the City of El Centro and Calexico are responsible for the incorporated areas of their respective cities.

Imperial County Land Use Policy

Decisions regarding land use permit applications, zoning changes, general plan amendments, ordinance revisions, and the adoption of a revised general plan for unincorporated Imperial County are made by the Imperial County Board of Supervisors ("Board of Supervisors").[56] The Board of Supervisors is comprised of elected officials from each of the five supervisorial districts in the County. The Board of Supervisors oversees and/or consults with the following groups within the Planning and Development Services Department when making its decisions:

- **Planning Commission:** Reviews, revises, and implements the Imperial County General Plan ("General Plan").[57] Conducts studies and prepares plans as delegated by the Board of Supervisors.
- **Airport Land Use Commission:** Reviews and makes determinations for the use of land within an airport's "sphere of influence", assures safety of air navigations, promotes air commerce, and conducts public hearings regarding any proposed development within their responsibility.
- **Local Agency Formation Commission:** An independent agency responsible for the implementation of the Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000. Responsible for oversight of boundary changes between the County, the cities, and special districts. The Heber Public Utility District (HPUD) is the only special district within the Corridor and provides limited public services such as water, wastewater, and parks and recreation services to the Heber community.
- **Environmental Evaluation Committee:** Evaluates all projects subject to the California Environmental Quality Act.
- **Building Board of Appeals:** Conducts hearings for appeals concerning the decision of the Building Official, Condemnation of Structures, and the Board of Supervisors in matters that deal with the Building Department and the Building Ordinance.

Ultimately, the Board of Supervisors is responsible for implementing and amending the Land Use Ordinance for the County.[58] The Land Use Ordinance provides comprehensive land use regulations for all unincorporated areas in Imperial County. The Land Use Ordinance also establishes the Planning & Development Department, which is tasked with managing land use development in the County. For instance, the Planning & Development Department (and associated Planning Commission) is responsible for developing the General Plan for the County,

[56] Imperial County. Board of Supervisors. Available at: http://www.icpds.com/?pid=4382. Accessed: May 2019.
[57] Imperial County. General Plan. Available at: http://www.icpds.com/?pid=571. Accessed: May 2019.
[58] Imperial County. Ordinances. Available at: http://www.icpds.com/?pid=573. Accessed: May 2019.

which serves as a policy guide for future development. The Land Use Element,[59] specifically, designates the general distribution, location, and extent standards for housing, business, industry, agriculture, open space, public facilities, and other land uses and is based on the following six concepts adopted by the Board of Supervisors:

1. Quality of life;
2. Safety for people and property;
3. Wide selection of social and economic opportunities;
4. Efficient use of natural, human, and financial resources;
5. Clean air, water, and land; and
6. Quiet, beautiful communities and rural areas.

The Land Use Element includes policies and programs that ensure appropriate land use development. These programs protect agricultural and industrial land uses from the encroachment of residential development, as well as protect residential land uses from environmental impacts of the former land uses. The Land Use Element strongly supports continued use of areas designated as agriculture and exclusion of incompatible residential uses in these areas. In addition, agricultural zones are preferred adjacent to industry. New residences, except for managers or caretakers, are prohibited in areas with industrial zoning. If residential areas are adjacent to industrial areas, the adjacent industrial area must be light industrial as a transition zone.

The General Plan designates the townsite of Heber and surrounding area bounded by Farnsworth Lane on the west, Correll Road on the north, Pitzer Road on the east, and Fawcett Road on the South as the Heber "Urban" Area. The Heber Urban Area development is further guided by the Heber Urban Area Community Plan ("Heber Community Plan").[60] Heber is expected to have substantial population growth as a result of new housing construction and expansion of sewer and water infrastructure. Therefore, many of the goals of the Heber Community Plan center around ensuring that new development is allowed to thrive while mitigating impacts to schools and residential areas in Heber. Specifically, existing industrial land uses are allowed to expand, but will be monitored to ensure the land uses do not pose an environmental threat. Agricultural development is not compatible with the Heber Community Plan. Existing agricultural land uses are allowed to be maintained and continued as long as it does not conflict with surrounding land uses and there is no expansion. Other measures included in the Heber Community Plan include discouraging the development of non-compatible land uses near geothermal plants, prohibiting

[59] Imperial County 2015. Land Use Element of the Imperial County General Plan. Available at: http://www.icpds.com/CMS/Media/Land-Use-Element-(2015).pdf. Accessed: May 2019.

[60] Imperial County. Heber Urban Area Plan. Available at: http://www.icpds.com/CMS/Media/Heber-Urban-Area-Plan.pdf. Accessed: May 2019.

the burning of household trash in the planning area, and encouraging the paving of unpaved roadways within the townsite.

Guidelines for updating and/or amending the General Plan are included in the Land Use Ordinance. For this, applications must be submitted to the Planning & Development Department. The application is then reviewed by the Planning Commission, which recommends the approval of the proposed change or denies the application. The Board of Supervisors is tasked with providing final approval of General Plan amendments.

City of El Centro Land Use Policy

The City of El Centro Community Development Department manages land use policy for the incorporated area of El Centro, as well as unincorporated portions of Imperial County that are within the City's sphere of influence. The Community Development Department is supervised by the El Centro City Council and consists of three divisions:[61]

1. Code Enforcement Division: Performs inspections and keeps records in order to improve and preserve the City of El Centro.

2. Building & Safety: Provides building code enforcement for all construction projects in the City of El Centro.

3. Planning & Zoning: Ensures compliance with the policies as set forth in the Zoning Ordinance and General Plan.

The Land Use Element of the El Centro General Plan provides a guide to land use planning in the City of El Centro.[62] Guidelines for updating and/or amending the El Centro General Plan are included in the Municipal Ordinance.[63] The El Centro Municipal Ordinance also divides the city into residential, commercial, manufacturing, and special/other zones. Commercial and industrial land uses are prohibited in all residential zones.

City of Calexico Land Use Policy

The City of Calexico Development Services Department manages land use policy for the incorporated area of Calexico, as well as unincorporated portions of Imperial County that are within the City's sphere of influence. The Calexico Development Services Department is supervised by the Calexico City Council and consists of three divisions[64]:

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[61] City of El Centro. Organizational Chart. Available at: http://www.cityofelcentro.org/userfiles/August%202014%20Org%20Chart%20All%20Depts.pdf. Accessed: May 2019.

[62] City of El Centro. General Plan. Available at: http://www.cityofelcentro.org/communitydevelopment/plans-documents. Accessed: May 2019.

[63] City of El Centro. Municipal Ordinance. Available at: https://library.municode.com/ca/el_centro/codes/code_of_ordinances?nodeId=CHCOTA_CH29ZO. Accessed: May 2019.

[64] City of Calexico. Development Services. Available at: http://www.calexico.ca.gov/index.asp?SEC=ECF96EA2-AA20-424A-8AE2-8DFD45E85A8A&Type=B_BASIC. Accessed: May 2019.

1. Building Division: Conducts plan checks, issues building permits, and performs inspections. Enforces the building codes as adopted by the City.

2. Engineering Division: Oversees the City's community development. Is responsible for the orderly development of all public infrastructure in the City of Calexico, such as water and wastewater systems.

3. Planning Division: Reviews all development proposals. Processes all requests for annexations, re-zonings, and land use entitlements. Is responsible for long-range and advanced planning in the City. Makes recommendations to the Planning Commission and City Council concerning updates to the Calexico General Plan and other planning documents.

The City of Calexico has also established the Planning Commission to review applications and oversee public hearings related to land use development and planning. The Planning Commission makes recommendations to the City Council based on an application's consistency and compatibility with the Calexico General Plan.

The Land Use Element of the Calexico General Plan provides a guide to land use planning in the City of Calexico.[65] Guidelines for updating and/or amending the Calexico General Plan are included in the Calexico Municipal Code.[66] The Calexico Municipal Code divides the city into residential, commercial, industrial, and special purpose zones.

3.2.5.3 Identification of Existing and Potential Land Use Issues

The proximity of residential and sensitive land uses to industrial and agricultural land uses was identified as a concern in the *Imperial County AB 617 Community Nominations* report.[67] In addition, during the fourth Steering Committee meeting, attendees expressed concern about the proximity of Heber Elementary School to the nearby water treatment plant and feedlot (see Figure 3.16). As shown in Figure 3.16, residential land uses are also located in close proximity to industrial and agricultural land uses in this area.

The proximity of the sensitive land uses to industry is a result of the economic drivers for the Corridor. The primary industries in the Corridor are commercial agriculture and various industrial facilities, around which the towns of El Centro, Calexico, and Heber were built. The land use plans in the Corridor tend to be supportive of the existing industry and discourage development of residential and sensitive land uses near the existing agriculture and industrial areas. In some instances, existing agriculture and land uses have been re-zoned to "conditionally compatible" land uses where there have been adjacent residential and sensitive land uses. Conditionally

[65] City of Calexico. 2015 Draft General Plan Update. Available at: http://www.calexico.ca.gov/index.asp?SEC=254C9C81-D449-44C7-B581-0B8070E31FF1&Type=B_BASIC. Accessed: May 2019.

[66] City of Calexico. Municipal Code. Available at: https://library.municode.com/ca/calexico/codes/code_of_ordinances?nodeId=CITY_CALEXICOMUCO1995. Accessed: May 2019.

[67] Available at: https://ww2.arb.ca.gov/resources/documents/imperial-county-ab617-community-nominations-submitted-partnership-comite-civico. Accessed: May 2019.

compatible land uses are land uses that are generally not compatible, but can be found compatible in certain situations, thus allowing existing non-conforming uses to remain in place.

Figure 3.16. Proximity of Sensitive Receptors to Industrial Sources in Heber

3.2.6 Assessment of Compliance

Under federal and state law, ICAPCD is under legal obligation to establish and enforce air quality regulations. These regulations are primarily meant to ensure that the area meets federal and state air quality standards. ICAPCD also has authority to regulate toxic and hazardous air emissions from stationary sources. These regulations are enforced in the same manner as those which pertain to ambient air quality standards.

ICAPCD is also responsible for issuing permits, monitoring permitted and unpermitted facilities for compliance, responding to air quality complaints, and performing inspections at permitted facilities. As of 2018, there are 217 ICAPCD permitted facilities operating in the El Centro-Heber-Calexico Corridor, with a total of 257 permitted units. Of these 217 permitted facilities, 43% include combustion sources, 16% are service stations, 8% are facilities operating paint booths, and 4% are geothermal facilities. The remaining 29% consist of beef feedlots, non-retail stationary sources, manufacturing, and other types of facilities. Permitting and enforcement statistics are detailed in Appendix F.

ICAPCD performs inspections at all permitted facilities in the El Centro-Heber-Calexico Corridor at least once per year. These inspections are intended to confirm that facilities are in compliance with air district rules and permit conditions. A total of 157 notices of violation (NOVs) and notices to comply (NTCs) were issued from 2016 to 2018 in the El Centro-Heber-Calexico Corridor. Of those violations, approximately 67% were administrative in nature, including failure to submit annual reports, failure to apply for permits, and failure to submit fees. The remaining violations were related to dust and opacity (3%), open burns (1%), service station maintenance (10%), and other stationary source violations (19%). A non-compliance rate can be defined as:

$$\frac{Number\ of\ facilities\ receiving\ violations}{Total\ number\ of\ facilities}$$

Using this definition, the Corridor had an overall non-compliance rate between 13 and 22 percent from 2016 to 2018.

4 Targets and Strategies

[TEXT – INTRODUCTORY TEXT REGARDING THIS COMPONENT OF THE EMISSION REDUCTION PROGRAM]

4.1 Emission Reduction Targets

[TEXT – OVERVIEW OF CARB'S PROPOSED APPROACH TO ESTABLISHING EMISSION REDUCTION TARGETS; 1) ESTABLISH COMPLIANCE GOALS AND TECHNOLOGY AND CONTROL TECHNIQUES GOALS USING INFORMATION FROM THE TECHNICAL ASSESSMENT; 2) QUANTIFY POTENTIAL REDUCTIONS RELATED TO COMPLIANCE AND TECHNOLOGY/CONTROL TECHNIQUE GOALS]

[TEXT – REVISIT ASSESSMENT OF COMPLIANCE – SECTION 3.2.6 AND IDENTIFY SPECIFIC COMPLIANCE GOALS TO BE ACHIEVED WITHIN FIVE YEARS]

[TEXT – HIGH-LEVEL DISCUSSION OF RELEVANT SOURCE-SPECIFIC TECHNOLOGIES AND CONTROL TECHNIQUES THAT CAN REDUCE EMISSIONS OF KEY POLLUTANTS; INCLUDES DISCUSSION (AND/OR TABLE/APPENDIX) OF TECHNOLOGY CLEARINGHOUSE RESULTS; INCLUDES DISCUSSION OF STEERING COMMITTEE'S CONTROL/TECHNOLOGY PREFERENCES; IDENTIFIES NUMERICAL GOALS FOR DEPLOYMENT AND IMPLEMENTATION TO BE ACHIEVED WITHIN FIVE YEARS]

4.2 Proximity-Based Goals

[TEXT – REVISIT SENSITIVE RECEPTOR ANALYSIS – SECTION 3.2.5 AND FOR ANY IDENTIFIED EXISTING/POTENTIAL LAND USE ISSUES, ESTABLISH MEASURABLE GOALS FOR DEPLOYING OR IMPLEMENTING EXPOSURE REDUCTION MEASURES]

4.3 Reduction Strategies

[TEXT – INTRODUCTORY TEXT REGARDING REDUCTION STRATEY EVALUATION AND SELECTION]

4.3.1 Regulatory Strategies

[TEXT – DESCRIPTION OF STRATEGY TYPE]

[TEXT – HIGH-LEVEL DESCRIPTIONS OF EVALUATION PROCESS; INCLUDING DISTRICT'S REVIEW OF BARCT AND ANY RELEVANT CONTROL MEASURE REVIEWS FROM RECENT SIPS; WILL REFER READER TO APPENDIX G-STRATEGY EVALUATION WHICH WILL CONTAIN TABLES EVALUATING APPLICABLE STRATEGIES]

[TEXT – DESCRIPTION OF EACH SELECTED, COST-EFFECTIVE STRATEGY OF THIS CATEGORY, INCLUDING INFORMATION REGARDING: EXPECTED EMISSIONS/EXPOSURE REDUCTIONS; COST-EFFECTIVENESS; IMPLEMENTATION ROLES AND RESPONSIBILITIES; RELEVANT TIMEFRAMES; TIES TO TECHNICAL ASSESSMENT AND STEERING COMMITTEE/PUBLIC PERSPECTIVES; POTENTIAL

ENFORCEMENT MECHANISMS – REFER READER TO ENFORCEMENT PLAN SECTION 5.3]

4.3.2 Facility Risk Reduction Audits

[TEXT – DESCRIPTION OF STRATEGY TYPE, INCLUDING HIGH-LEVEL DESCRIPTION OF AB 2588 REQUIREMENTS AND PRESENCE OF AB 2588 FACILITIES IN/AROUND COMMUNITY]
[TEXT – HIGH-LEVEL DESCRIPTION OF REVIEW OF AB 2588 FACILITIES AND FOLLOW-UP ACTIONS; WILL REFER READER TO APPENDIX G-STRATEGY EVALUATION, IF DATA/INFORMATION IS COPIOUS]

4.3.3 Air Quality Permitting

[TEXT – DESCRIPTION OF STRATEGY TYPE, INCLUDING DISCUSSION OF TECHNOLOGY CLEARINGHOUSE AND BACT/T-BACT FOR NEW OR MODIFIED SOURCES;

[TEXT – WILL IDENTIFY IF THERE ARE ANY FORESEEABLE NEW OR MODIFIED SOURCES THAT WOULD BE SUBJECT TO THIS]

4.3.4 Enforcement Strategies

[TEXT – DESCRIPTION OF STRATEGY TYPE; WILL CITE TO THE ANALYSIS IN ENFORCEMENT PLAN SECTION 5.2, SPECIFICALLY THE DISCUSSION REGARDING OPPORTUNITIES FOR ENHANCED ENFORCEMENT ACTIVITIES]

[TEXT – INCLUDE DISCUSSION REGARDING NEAR-TERM ENFORCEMENT STRATEGIES TO IMPROVE COMPLIANCE WITH EXISTING RULES]

4.3.5 Incentives-Based Strategies

[TEXT – DESCRIPTION OF STRATEGY TYPE]

4.3.5.1 Existing Funding Programs

[TEXT – DESCRIPTION OF EXISTING FUNDING PROGRAMS THAT APPLY TO SOURES WITHIN THE COMMUNITY AND HOW THEY WILL BE USED TO SUPPORT ACHIEVING THE TARGETS AND GOALS OF THE PLAN/PROGRAM]

4.3.5.2 Potential Funding Programs

[TEXT – IDENTIFICATION OF POTENTIAL FUNDING OPPORTUNITIES, HOW THEY COULD BE USED TO ACHIEVE FURTHER REDUCTIONS, AND ACTIONS THE DISTRICT AND CARB WILL TAKE TO SECURE ADDITIONAL FUNDS, AS NECESSARY; DISCUSSION WILL REFERENCE THE TECHNOLOGY CLEARINGHOUSE AS APPROPRIATE]

4.3.5.3 Outreach Strategies

[TEXT – DISCUSSION OF CURRENT AND PLANNED OUTREACH STRATEGIES FOR INFORMING COMMUNITY MEMBERS AND BUSINESS OWNERS OF FUNDING OPPORTUNITIES]

4.3.6 Land Use Strategies

[TEXT – DESCRIPTION OF STRATEGY TYPE]

[TEXT – HIGH-LEVEL DESCRIPTIONS OF EVALUATION PROCESS; WILL REFER READER TO APPENDIX G-STRATEGY EVALUATION WHICH WILL CONTAIN TABLES EVALUATING APPLICABLE STRATEGIES]

[TEXT – DESCRIPTION OF EACH SELECTED, COST-EFFECTIVE STRATEGY OF THIS CATEGORY, INCLUDING INFORMATION REGARDING: EXPECTED EMISSIONS/EXPOSURE REDUCTIONS; COST-EFFECTIVENESS; IMPLEMENTATION ROLES AND RESPONSIBILITIES; RELEVANT TIMEFRAMES; TIES TO TECHNICAL ASSESSMENT AND STEERING COMMITTEE/PUBLIC PERSPECTIVES]

4.3.7 Mitigation Strategies

[TEXT – DESCRIPTION OF STRATEGY TYPE]

[TEXT – HIGH-LEVEL DESCRIPTIONS OF EVALUATION PROCESS; WILL REFER READER TO APPENDIX G-STRATEGY EVALUATION WHICH WILL CONTAIN TABLES EVALUATING APPLICABLE STRATEGIES]

[TEXT – DESCRIPTION OF EACH SELECTED, COST-EFFECTIVE STRATEGY OF THIS CATEGORY, INCLUDING INFORMATION REGARDING: EXPECTED EMISSIONS/EXPOSURE REDUCTIONS; COST-EFFECTIVENESS; IMPLEMENTATION ROLES AND RESPONSIBILITIES; RELEVANT TIMEFRAMES; TIES TO TECHNICAL ASSESSMENT AND STEERING COMMITTEE/PUBLIC PERSPECTIVES]

4.3.8 Engagement Approaches

[TEXT – DESCRIPTION OF STRATEGY TYPE]

[TEXT – HIGH-LEVEL DESCRIPTIONS OF EVALUATION PROCESS; WILL REFER READER TO APPENDIX G-STRATEGY EVALUATION WHICH WILL CONTAIN TABLES EVALUATING APPLICABLE STRATEGIES]

[TEXT – DESCRIPTION OF EACH SELECTED, COST-EFFECTIVE STRATEGY OF THIS CATEGORY, INCLUDING INFORMATION REGARDING: EXPECTED EMISSIONS/EXPOSURE REDUCTIONS; COST-EFFECTIVENESS; IMPLEMENTATION ROLES AND RESPONSIBILITIES; RELEVANT TIMEFRAMES; TIES TO TECHNICAL ASSESSMENT AND STEERING COMMITTEE/PUBLIC PERSPECTIVES]

4.3.9 Reduction Strategy Overview

[TEXT – SUMMARY DISCUSSION REGARDING SELECTED STRATEGIES AND HOW THEY TIE BACK TO THE ESTABLISHED TARGETS AND GOALS]

5 Enforcement Plan

5.1 Enforcement Overview

Enforcement of regulations by CARB and District staff is critical to achieving air quality goals. The primary function of enforcement activities is to improve compliance with air quality rules and regulations. Enforcement responsibilities for regional and local air quality issues are jointly shared between the District and CARB. CARB is primarily responsible for the enforcement of mobile source rules, while the District is responsible for area-wide and stationary source enforcement. In some cases, CARB has established memoranda of understanding with the District to delegate enforcement authority.

5.1.1 ICAPCD Enforcement Overview

The ICAPCD Enforcement Division consists of six compliance and enforcement personnel, including four compliance inspectors, one air quality specialist, and one manager. Enforcement officers perform inspections of facilities holding permits to determine compliance with District rules and regulations, permit conditions, and state and federal rules on an annual basis. During these inspections, the inspector reviews processes and operations to determine compliance status.

Additionally, the Enforcement Division investigates all air quality complaints. Complaints can be filed through the District's general phone number (1-442-265-1800), the Cal-EPA website,[68] or the CARB website.[69] Imperial County residents may also file environmental reports online through the IVAN Imperial website.[70] The District's general phone number is active during business, non-business, weekend, and holiday hours. The District logs the call and then assigns the complaint to an inspector. Every complaint received by ICAPCD is investigated within 24 hours of receipt. During regular business hours complaints are assigned to area inspectors as soon as possible. Enforcement personnel contact all complainants, unless the complainant has indicated otherwise, or has filed an anonymous complaint. Enforcement officers record details of all complaint investigations, including the date and time of contact, whether the contact was in person or by telephone, whether the complaint was confirmed, and additional details as needed. This information is maintained within the District's archives.

During facility inspections and in response to complaints, enforcement officers issue NTCs for minor compliance issues and NOVs for more serious compliance issues, as necessary. These notices serve as a deterrent for non-compliance and occasionally have fines associated with them.

5.1.2 CARB Enforcement Overview

[TEXT – DESCRIPTION OF THE ENFORCEMENT BRANCH OF CARB, INCLUDING PERSONNEL MAKE-UP, JURISDICTION, AND RESPONSIBILITIES]

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[68] Information available at: https://calepacomplaints.secure.force.com/complaints/Complaint. Accessed: May 2019.
[69] Information available at: https://www.arb.ca.gov/enf/complaints/complaints.htm. Accessed: May 2019.
[70] Information available at: https://ivan-imperial.org/report. Accessed: May 2019.

5.2 Three-Year Retrospective Reviews of Enforcement

5.2.1 ICAPCD Enforcement Review

ICAPCD prepared a three-year retrospective review to help inform development of strategies to enhance enforcement in the District. There are currently 217 ICAPCD permitted facilities operating in the El Centro-Heber-Calexico Corridor with 257 permitted units. The permits at these facilities cover a wide range of operations, including combustion, spraying of coatings, service stations, and geothermal energy. ICAPCD inspected 100 percent of the facilities within the El Centro-Heber-Calexico Corridor annually from 2016 to 2018. During that time, the District issued 157 NTCs and NOVs to the facilities within the Corridor. Of those violations, approximately 67 percent were administrative in nature, including failure to submit annual reports, failure to apply for permits, and failure to submit fees. The remaining violations were related to dust and opacity (3%), open burns (1%), service station maintenance (10%), and other stationary source violations (16%). A non-compliance rate can be defined as:

$$\frac{Number\ of\ facilities\ receiving\ violations}{Total\ number\ of\ facilities}$$

Using this definition, the Corridor had an overall non-compliance rate between 13 and 22 percent from 2016 to 2018.

ICAPCD received 75 complaints in the El Centro-Heber-Calexico Corridor from 2016 to 2018. Sixty-six percent of these complaints were related to dust, open burning, and smoke. These complaints predominantly resulted in issuance of warnings, or situations where nothing is found upon inspection. Appendix F contains tables detailing the results of the three-year retrospective review of enforcement.

Based on the 3-year retrospective review, there are a number of opportunities for enhanced enforcement in the Corridor. As discussed above, the emissions-related NOVs and NTCs were written predominantly for stationary source and service station activities, and also include dust and opacity, and open burning. ICAPCD intends to increase the compliance rate through the enhanced enforcement measures described in Section 5.3 below.

5.2.2 CARB Enforcement Review

[TEXT – ASSESSMENT OF COMPLIANCE WITH CARB RULES AND REGULATIONS WITHIN AND DIRECTLY SURROUNDING THE COMMUNITY; SHOULD IDENTIFY RELEVANT RULES AND REGULATIONS AND CURRENT METHODS FOR DETERMINING COMPLIANCE]

5.3 Enforcement Compliance Mechanisms

5.3.1 Overview of Compliance Goals

[TEXT – REVISIT COMPLIANCE GOALS ESTABLISHED IN SECTION 4.1]

5.3.2 Enhanced Enforcement Measures

In order to improve compliance rates within the ICAPCD, the District is proposing certain enhanced enforcement measures with this Plan. These measures are intended to increase

community engagement, leverage inter-agency relationships, facilitate the complaint process, and generally improve enforcement in the Corridor.

A. Community Measures

A1. Leveraging Technology for Greater Enforcement

ICAPCD is in the process of installing cameras in the desert on the west side of Imperial County. While this area is outside of the Corridor, the population in the Corridor could be impacted from fugitive dust originating in the desert. ICAPCD is proposing to make the video feed from these cameras available to the public. This would not only increase the number of eyes surveilling the footage, but also allow the public to monitor for potential exposure concerns.

A2. Cross-Agency Training

The District is looking to establish regular communication with outside agencies in order to improve violation response time. To that end, the District is proposing to perform cross training for other local agencies on District rules so that they can readily identify specific types of violations. Examples of cross training include working with the Imperial County Sheriff's Department and city representatives to learn about the dust impacts of illegal trespassing and collaborating with the fire department on properly identifying illegal burning activity.

A3. Increased Community Outreach – Workshops and Trainings

The District is looking to increase community outreach through workshops and trainings to both industry and the public. The District is proposing to provide annual training to industry, with certain focused training (i.e., construction dust mitigation) available upon request. Additionally, the District is proposing to provide enforcement-related workshops to the community to facilitate a better understanding of local compliance issues and educate on community-driven enforcement.

A4. Increased Community Outreach – Publications

The District is proposing to increase community outreach through the publication of a quarterly newsletter. This newsletter would include information on enforcement statistics and rule changes, and would be intended for local agencies, affected facilities, and the public.

A5. Formation of a Dedicated Outreach Team

Conducting community-level outreach is key to understanding community concerns, including identification of potential violations or unpermitted sources. The District and CARB are proposing to form a dedicated outreach team to

actively engage with the Steering Committee and respond to community concerns.

B. Complaint Response Measures

B1. Facilitation of the Complaint Process

The District is looking to facilitate the complaint process in order to increase public access to filing complaints and more accurately capture complaint information. To do this, the District is proposing to create an online complaint form, as well as add enforcement-related information on the ICAPCD website homepage (https://www.co.imperial.ca.us/AirPollution/index.asp), including publishing the complaint line (442-265-1800) and including a link to the ICAPCD complaint webpage (https://www.co.imperial.ca.us/AirPollution/index.asp?fileinc=compreport).

B2. Strategic Updates to Policy #17

The District is proposing to revise internal Policy #17, *Guidelines for Staff Processing and Investigation of Complaints*. The policy would be revised to specify circumstances under which NTCs, NOVs, and warnings are issued, as well as add the address of the location of concern to the complaint log. The effect of these revisions would be to both standardize the process for issuance of NTCs, NOVs, and warnings to provide uniformity, as well as assist the inspectors with locating the source of the complaint.

C. Enforcement Improvements

C1. Strategic Updates to Policies #18 and #28

The District is proposing to revise internal Policy # 18, Notices of Violation Issuance and Follow Up and Policy #28, Notices to Comply – Administrative Guidelines. The District is proposing to revise Policy #18 to include follow-up guidelines such as the time period for following up after a NOV has been issued, procedures when a facility is found in compliance, and procedures when a facility is found to be out of compliance. The District is proposing to revise Policy #28 to include follow up guidelines such as procedures when a facility is found in compliance. The effect of these revisions would be to standardize follow-up guidelines.

C2. Annual Review and Prioritization of Enforcement

The District is proposing to perform an annual retrospective review of enforcement statistics in order to identify areas of improvements. This information would be shared with the public and used to establish enforcement

priorities for the upcoming year, as well as inform training/educational priorities for both facilities and the community.

5.3.3 Enforcement of New Regulatory Strategies

[TEXT – REVISIT DISCUSSION REGARDING POTENTIAL ENFORCEMENT MECHANISMS FOR REGULATORY STRATEIGES IN SECTION 4.3.1]

6 Metrics to Track Progress

6.1 Required Metrics

[TEXT]

6.2 Recommended Additional Metrics

[TEXT]

7 California Environmental Quality Act

[TEXT]

8 Conclusion and Checklist

8.1 Checklist of Community Emissions Reduction Program Criteria and Conclusions

[TEXT]

Table 8.1. Community Emission Reduction Program Criteria

Topic	Description	Location in Document
Health-Based Air Quality Objectives	**Provide a description of health-based objectives**	**Chapter 1**
Community Steering Committee	**Provide documentation on the community steering committee**	**Chapter 2; Appendix B**
...		

9 References

[TO BE UPDATED]

APPENDIX A
[UPDATE]

APPENDIX B
[UPDATE]

APPENDIX C
[UPDATE]

APPENDIX D
[UPDATE]

APPENDIX E
[UPDATE]

AIR POLLUTION CONTROL DISTRICT

DRAFT

IMPERIAL COUNTY YEAR 1 COMMUNITY AIR MONITORING PLAN FOR THE EL CENTRO-HEBER-CALEXICO CORRIDOR

June 30, 2019

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IMPERIAL COUNTY
YEAR 1 COMMUNITY AIR MONITORING PLAN
FOR THE EL CENTRO-HEBER-CALEXICO CORRIDOR

Prepared for

Imperial County AB 617 Steering Committee

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June 30, 2019

Contents

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Abbreviations and Acronyms

AB 617	Assembly Bill 617
AC	alternating current
AQDA	Air Quality Data Action
AQI	air quality index
AQMIS	Air Quality and Meteorological Information System
AQS	Air Quality System
BAM	beta attenuation mass
C-14	carbon 14
CAFO	concentrated animal feeding operations
CAL	community air quality level
CAN	corrective action notification
CAPP	Community Air Protection Program
CAP	criteria air pollutant
CARB	California Air Resources Board
CCV	Comite Civico del Valle, Inc.
CFR	Code of Federal Regulations
CH_4	methane
CL	CARBLogger
CO	carbon monoxide
DMS	Data Management System
E-BAM	environmental beta attenuation mass
FEM	Federal Equivalent Method
FRM	Federal Reference Method
GPS	global positioning system
ICAPCD	Imperial County Air Pollution Control District
IVAN	Identifying Violations Affecting Neighborhoods
Pb	lead
NAAQS	National Ambient Air Quality Standards
NH_3	ammonia
NIST	National Institute of Standards and Technology
NO_2	nitrogen dioxide
O_3	ozone
OEHHA	Office of Environmental Health Hazard Assessment
OHV	off-highway vehicle
PEP	Performance Evaluation Program
PM_{10}	respirable particulate matter
$PM_{2.5}$	fine particulate matter
QA/QC	quality assurance/quality control
QAPP	Quality Assurance Project Plan
QAS	Quality Assurance Section
R & P	Rupprecht & Patashnick Co., Inc.
SCAQMD	South Coast Air Quality Management District

SFTP	Secure File Transfer Protocol
SIP	State Implementation Plan
SO_2	sulfur dioxide
SOP	standard operating procedures
TAC	toxic air contaminant
µg	microgram
$\mu g/m^3$	microgram per cubic meter
USEPA	United States Environmental Protection Agency

1 Introduction and Background

1.1 Introduction

This Year 1 Community Air Monitoring Plan ("Monitoring Plan" or "Plan") presents objectives and methodologies for community air monitoring in the El Centro-Heber-Calexico Corridor in Imperial County, California ("Community"). This Plan was developed in response to the selection of this Community to conduct community air monitoring under the California Air Resources Board (CARB) Community Air Protection Program (CAPP), a program established to help implement California Assembly Bill 617 (AB 617). This Plan specifically addresses the 14 elements laid out for community air monitoring in CARB's Community Air Protection Blueprint ("Blueprint"), a guidance document developed for the CAPP.[1] These elements ultimately serve to address three objectives, which are to:

- Determine the reason for conducting community air monitoring;
- Describe how the community air monitoring will be conducted; and
- Identify how the data will support action to reduce air pollution within the Community.

When brought together, the 14 elements demonstrate how the Community plans to conduct air monitoring at the local scale to generate air quality data that is accurate, accessible, transparent, and understandable, and ultimately useful towards improving local air quality.

1.2 Background

1.2.1 Assembly Bill 617

On July 26, 2017, California Governor Jerry Brown signed into law AB 617, an act to amend and add sections regarding air pollution to California's Health and Safety Code. The bill directs CARB and local air districts throughout the state (including the Imperial County Air Pollution Control District [ICAPCD or "District"]) to enact measures to promote public health and welfare by reducing air pollution on a local scale, particularly in disadvantaged communities that are disproportionately burdened by air pollution. AB 617 was designed to accomplish this via the establishment of the CAPP, which puts the emphasis on community-focused actions that go beyond the regional and statewide air quality programs already in place.

AB 617 was designed to specifically improve air quality in disadvantaged communities with high exposure burdens for criteria air pollutants[2] (CAPs) and toxic air contaminants[3] (TACs). These

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[1] California Air Resources Board. 2018. *Community Air Protection Blueprint.* October. Available at: https://ww2.arb.ca.gov/sites/default/files/2018-10/final_community_air_protection_blueprint_october_2018.pdf. Accessed: May 2019.

[2] Includes the six federally regulated air pollutants with National Ambient Air Quality Standards established by the USEPA as a requirement of the Clean Air Act. Additional information available at: https://www.epa.gov/criteria-air-pollutants. Accessed: May 2019.

[3] Defined by the California Health and Safety Code as air pollutants which may cause or contribute to an increase in mortality or an increase in serious illness, or which may pose a present or potential hazard to human health. Additional information available at: https://oehha.ca.gov/air/toxic-air-contaminants. Accessed: May 2019.

improvements are to be accomplished through community emissions reductions programs, community air monitoring plans, or both. Section 1.2.2 describes the process by which the first round of communities was selected, including the El Centro-Heber-Calexico Corridor in Imperial County.

1.2.2 Community Nomination Overview

As part of the CAPP, CARB's Governing Board selected California communities to participate by implementing a community air monitoring program, a community emissions reduction program, or both. AB 617 stipulated that selection of the first round of communities was to be completed by October 1, 2018 and annually thereafter (i.e., beginning January 1, 2020). Each year, the selection process will involve three steps: Identification, Assessment, and Selection. During the Identification phase, CARB staff will update the running list of potential communities for participation in the CAPP. Input will be collected from air districts across the state and from the Office of Environmental Health Hazard Assessment (OEHHA), as well as internally from CARB's own experience and data resources. Community members will also be able to nominate their own or other communities for consideration. Once this broad list of potential communities has been updated, the next step is to assess the options.

In the Assessment phase, CARB staff will continue to consult with community stakeholders, OEHHA, and the air districts to determine which potential communities are experiencing disproportionate burdens due to cumulative air pollution exposure. The CAPP Blueprint details the factors that are to be evaluated during this phase, which may include ambient air concentrations of specific CAPs and TACs, quantified health risk estimates based on modeling, the proximity of sensitive populations to significant sources of air pollution, and socio-economic factors. Once the available and relevant data has been assessed, the final phase, Selection, is initiated.

1.2.3 Imperial County Community Nominations

In anticipation of the selection of communities to participate in the CAPP, both local air districts and citizens alike identified communities and submitted nominations to CARB. Ahead of the first selection due date of October 1, 2018, ICAPCD partnered with a local advocacy and environmental justice group known as Comite Civico del Valle, Inc. ("CCV") to author a report entitled *Imperial County AB 617 Community Nominations*,[4] with the purpose of informing CARB on which communities within Imperial County should be selected to participate in the first year of the CAPP. This report included relevant data regarding health, socioeconomics, and air quality monitoring for two cities (Calexico and El Centro) and one unincorporated community (Heber) within Imperial County. The geographic proximity of these three areas lent to their being grouped together as a single AB 617-nominated community known as the El Centro-Heber-Calexico

[4] Available at: https://ww2.arb.ca.gov/resources/documents/imperial-county-ab617-community-nominations-submitted-partnership-comite-civico. Accessed: May 2019.

Corridor ("Corridor"), which ICAPCD nominated as its first community for participation in the CAPP.

On September 27, 2018, the CARB Board made final its selections for the Year 1 communities to participate in the CAPP.[5] The El Centro-Heber-Calexico Corridor was chosen for both community air monitoring and a community emissions reduction program.

1.2.4 Community Steering Committee

A hallmark of the CAPP is community-driven action. AB 617 was designed to allow members from within the selected communities to take an active role in the development of their own air monitoring plans and emission reduction programs. Those who live and work in a selected community are both the most familiar with it and the most invested in promoting its environmental quality. Thus, AB 617 places an emphasis on community-driven action achieved under the oversight of groups known as community steering committees. These committees are to be comprised primarily of individuals who live and work within the communities they will represent. The CAPP Blueprint suggests that these committees include "participants from local community-based environmental justice organizations, schools, land use planning agencies, transportation agencies, local health departments (e.g., hospitals, clinics, physical rehabilitation centers, public health counseling services), academic researchers, and labor organizations, as appropriate."[6]

In late 2018, ICAPCD in conjunction with CCV assembled the steering committee for the El Centro-Heber-Calexico Corridor. Referred to as the AB 617 Community Steering Committee ("Steering Committee"), this group is intended to be involved with all aspects of the Monitoring Plan and community emissions reduction program ("Emissions Reduction Program"), including participant recruitment, identification of key objectives, monitoring site selection, emission reduction strategy selection, and evaluation and dissemination of results. The Steering Committee is also intended to maintain communication with other Community members throughout the planning process to gather input from concerned citizens and facilitate ongoing discussion.

1.3 Objective

While the El Centro-Heber-Calexico Corridor was designated as a community planning area to develop both a community air monitoring plan and a community emissions reduction program, this Plan serves to satisfy the requirements of only the former. It was developed according to the guidelines laid out for community air monitoring in the CAPP Blueprint. The goal in developing this Monitoring Plan is ultimately to better understand the impacts of air pollution in the Community through gathering more detailed information and data about air quality on a local scale. This information will in turn be used to inform and support the Emissions Reduction Program that is to

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[5] California Air Resources Board. 2018. *Resolution 18-37: Assembly Bill 617 Community Air Protection Program – Community Selection*. Available at: https://www.arb.ca.gov/board/res/2018/res18-37.pdf?_ga=2.16620022.1778124676.1548719155-1155382275.1462320702. Accessed May 2019.

[6] California Air Resources Board. 2018. *Community Air Protection Blueprint*. October. Available at: https://ww2.arb.ca.gov/sites/default/files/2018-10/final_community_air_protection_blueprint_october_2018.pdf. Accessed: May 2019.

be developed concurrently. Ultimately, these programs will contribute to the overall objective of promoting public health and welfare in the Community through improvements in local air quality.

1.4 Document Organization

This Plan was developed and organized following the guidelines laid out in the CAPP Blueprint prepared by CARB. Specifically, each of the subsequent chapters in this Plan addresses one or more of the 14 planning elements (summarized in Table 1.1 below).

Table 1.1. Community Air Monitoring Plan Elements

What is the reason for conducting community air monitoring?	
1	Form community partnerships.
2	State the community-specific purpose for air monitoring.
3	Identify scope of actions.
4	Define air monitoring objectives.
5	Establish roles and responsibilities.
How will monitoring be conducted?	
6	Define air quality objectives.
7	Select monitoring methods and equipment.
8	Determine monitoring areas.
9	Develop quality control procedures.
10	Describe data management.
11	Provide work plan for conducting field measurements.
How will data be used to take action?	
12	Specify process for evaluating effectiveness.
13	Analyze and interpret data.
14	Communicate results to support action.

2 Element 1 – Form Community Partnerships

2.1 Element 1 Overview

The first element presented in the CAPP Blueprint is to form community partnerships. Community members are well suited for providing direct insight on the air quality issues in their community and their input is necessary to ensure effective community-focused monitoring. As part of this element, a community steering committee must be formed to facilitate communication between community members and the air district, as well as to carry out air monitoring goals and objectives. Additionally, a community steering committee is used to develop outreach opportunities to ensure that the community is able to participate in the decision-making process. The Steering Committee formed by the ICAPCD and CCV fulfills the requirements of this element.

2.2 Community Steering Committee

The purpose of the Steering Committee is to create and execute air monitoring objectives, provide information to Community members, and support local actions related to air monitoring. The Steering Committee for the El Centro-Heber-Calexico Corridor was convened by a collaborative effort between ICAPCD and CCV, following the selection of the Corridor as a CAPP Year 1 Community. Since its formation, the Steering Committee has been involved with all aspects of both this Monitoring Plan and the Emissions Reduction Program. In the formation of this Plan, Steering Committee activities have included and will continue to include participant recruitment, identification of key objectives, monitoring site selection, and evaluation and dissemination of results. Additionally, the Steering Committee was intended to serve as a communication channel with other Community members to gather input from concerned citizens and facilitate ongoing discussion.

On November 1, 2018, the ICAPCD hosted an informational meeting regarding the development of an AB 617 steering committee for the El Centro-Heber-Calexico Corridor. Open to the general public, the purpose of this meeting was to allow Community members to obtain information about the Community's upcoming community air monitoring and emission reduction programs. Topics discussed at the meeting included the background of AB 617, the initial efforts of CCV and ICAPCD conducted to that point, plans for upcoming community projects to be implemented as part of CAPP participation, and development of the Steering Committee.

At the November 1 meeting, emphasis was placed on getting the Steering Committee established, with the goal of holding its first meeting on November 14. ICAPCD staff explained that one of the initial objectives would be to develop bylaws for the group. Applications for the Steering Committee were distributed, and a due date was set for November 5. The application form posed specific questions to applicants designed to gauge their level of interest, as well as gather what special knowledge or perspective they could contribute to the group towards ensuring that the larger Community is being fairly represented and its wellbeing considered throughout the AB 617 process.

Following this application period, Steering Committee members were evaluated and selected. Table 2.1 displays the members who were chosen for the first AB 617 Steering Committee for the Community, the majority of which are residents of the El Centro-Heber-Calexico Corridor.

Table 2.1. AB 617 Community Steering Committee Members, 2018-2019

Representing	Members	Alternates
Co-Chair (ICAPCD)	Matt Dessert	Reyes Romero
Co-Chair (CCV)	Luis Olmedo	Christian Torres
Community Corridor	Mersedes Martinez	Rosa Guerrero
Community Corridor	Diahna Garcia-Ruiz	Bob Fischer
Community Corridor	Rene Felix	Tomas Oliva
Community Corridor	Mireya Diaz	Sandra Mendivil
Community Corridor	Kristian Salgado	Chris Gomez Wong
Community Corridor	Blake Plourd	Steven Snow
Community Corridor	Sergio Cabanas	Michael Moore
Community Corridor	Mark Baza	Virginia Mendoza
Community Corridor	Aide Fulton	Diego Gamboa
Community Corridor	Mary Salazar	Irene Garcia
Community Corridor	John Hernandez	Paul Monarrez
Community Corridor	Jose Celaya	VACANT
Community Corridor	VACANT	VACANT

As Table 2.1 displays, the Steering Committee consists of 15 members made up of two *ex-officio* co-chairs (representing ICAPCD and CCV) and 13 Community representatives. Some of these Community representatives are affiliated with various organizations around Heber, El Centro, and Calexico, including school districts, local government commissions, businesses, and non-profit organizations. They were selected to participate in the Steering Committee based on their potential to act as leaders and contribute technical expertise during planning. In the event that any Steering Committee members are unable to perform their duties, alternates were selected to step in.

In January 2019, staff from ICAPCD and CCV developed a draft AB 617 Steering Committee Charter ("draft Charter") for consideration by the Steering Committee. The draft Charter was discussed and approved by the Steering Committee during the February 13th Steering Committee Meeting. The Charter was then submitted to the ICAPCD Governing Board, comprised of the Imperial County Board of Supervisors. Formally approved by the Board on March 19, 2019, the

Charter establishes the authority and purpose of the Steering Committee along with its bylaws, and the intended structure and schedule for regular Steering Committee meetings.[7]

The Steering Committee is responsible for holding regular meetings to discuss topics related to the CAPP and provide recommendations for action to the ICAPCD Board. Topics of discussion can include approaches for community engagement and outreach, sources contributing to the Community's air quality challenges, strategies for developing and implementing the emissions monitoring and reductions programs, targets and goals, and metrics to track progress. The Charter specifies that these meetings be held at least once per month, unless there is a lack of agenda topics, in which case a vote may be held to cancel the following month's meeting. Special meetings may also be held as required. A summary of the Steering Committee meetings conducted to date is available in Appendix A. A copy of the Charter is presented as Appendix B.

2.3 Outreach Overview

As part of the commitment to community engagement and outreach, ICAPCD staff operates a website dedicated to AB 617 activity in Imperial County.[8] The site offers background information on AB 617 and has pages for information on the Steering Committee members, meetings and events (including notes and recordings from past meetings), contact information, and links to important resources such as the CARB home page and websites for local air monitoring networks. Additionally, both District and CCV staff have maintained that they will be available as resources to anyone with questions or just looking to gather more information about CAPP implementation in Imperial County. Information regarding the dedicated District contact person for this Plan is provided below.

Dedicated ICAPCD Contact Person

Belen Leon
Air Pollution Control District Project Manager
Phone: 442-265-1800
Email: belenleon@co.imperial.ca.us

The Steering Committee meetings are open to the public. They are advertised via email notifications, as well as flyers posted to the District's website. To enhance public understanding and participation, a professional interpretation service is available at each meeting to provide translation services. At each meeting, a specific agenda item is included to allow for the public to issue comments. These comments are either addressed during the meeting or included as a discussion point for future meetings.

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[7] AB 617 Community Steering Committee Charter (dated March 19, 2019). Available at: https://docs.wixstatic.com/ugd/99eb03_645f259f6bb44a4f81bedd12dfc98ce6.pdf. Accessed: June 2019.

[8] ICAPCD. AB 617 Imperial County: Calexico, Heber, El Centro Corridor. Available at: https://www.icab617community.org/. Accessed: May 2019.

Community input received during the Steering Committee meetings has demonstrated the value of collaborating with members of the Community on both the Monitoring Plan and the Emissions Reduction Program. Going forward, the Steering Committee will continue to engage with the public through monthly meetings. The flyer notification system has worked well in terms of spreading the word about meetings and promoting attendance, so it will continue to be utilized.

Finally, the ICAPCD has an established social media presence which they utilize to promote engagement by the Community in matters related to air quality and the AB 617 plans. The District operates a Facebook page[9] where regular posts are made to notify the public about important items such as high wind advisories, times when burning is and is not permitted, and daily air quality reports that provide summaries of ambient pollutant measurements recorded at regulatory monitoring stations around the County, as well as advertisements for upcoming Steering Committee meetings and photos and videos from past meetings. Similar posts are also made to the District's Instagram[10] and Twitter pages.[11]

[9] Available at: https://www.latest.facebook.com/Countyair/. Accessed: May 2019.
[10] Available at: https://www.instagram.com/county_air/. Accessed: May 2019.
[11] Available at: https://twitter.com/county_air. Accessed: May 2019.

3 Element 2 – State the Community-Specific Purpose for Air Monitoring

3.1 Element 2 Overview

While the common goal of the CAPP at large is to improve air quality in specific communities throughout California, not all regions are facing the same issues. Thus, the CAPP Blueprint specifies that community air monitoring plans must clearly define the purpose for conducting monitoring in the given community. Particular pollutants of concern and potential locations of their sources should be provided as support for the decision to conduct air monitoring in the community. Additionally, the Blueprint specifies that if there is already some sort of air monitoring program in place in the community, a plan should be identified for expanding it to suit the requirements for monitoring plans under AB 617. Alternative approaches beyond existing monitoring programs should also be evaluated for their potential to benefit the monitoring plan.

As described in the sections below, the El Centro-Heber-Calexico Corridor is characterized with impaired air quality and the broader region has been designated as a federal nonattainment area for multiple National Ambient Air Quality Standards (NAAQS). Emissions from both sides of the international border have been shown to contribute to the air quality burden in the Community. The Emission Reduction Program, being developed concurrently with this Plan, will look to improve current conditions by identifying emission reduction strategies focused on sources on the United States side of the border. It will also identify strategies for reducing human exposure to air pollution, which will be effective regardless of where emissions originate. Monitoring can be a useful tool in tracking emission reductions as well as informing a community of its current exposure to air pollution. While both regulatory and community monitoring exists within the El Centro-Heber-Calexico Corridor, this Plan seeks to leverage and build upon that monitoring to meet the needs of the Community. Ultimately, the community-specific purpose for air monitoring is defined by the Community's desire to 1) to formally track the progress of the Emission Reduction Program and 2) provide higher resolution real-time air quality data that is easy to understand and access.

3.2 Air Quality Issues Facing the Community

3.2.1 Federal Attainment Status

As shown in Table 3.1 below, the El Centro-Heber-Calexico Corridor is located within a region that is nonattainment for the 8-hour ozone, 24-hour respirable particulate matter (PM_{10}), and 24-hour and annual fine particulate matter ($PM_{2.5}$) NAAQS. The NAAQS are standards established by the United States Environmental Protection Agency (USEPA) that are designed to be protective of human health. These standards are periodically revised to accurately reflect the latest scientific knowledge. When air quality in an area deteriorates to the point where a NAAQS is exceeded, regulatory mechanisms are triggered which typically require the area to create a State Implementation Plan (SIP) to address the underlying issues. These extensive documents usually take several months to years to develop and include many facets such as analyses of monitoring data, emissions modeling, emissions inventory development, control measures review, and even implementation of new control measures. Within the past two years, the District

has developed and approved SIPs for PM_{10},[12] $PM_{2.5}$,[13] and ozone (O_3).[14] While beneficial, these plans are designed to address air quality issues at the regional level for Imperial County. In contrast, this Community Air Monitoring Plan prepared in accordance with AB 617 expands upon previous efforts in the SIPs while specifically focusing on the El Centro-Heber-Calexico Corridor.

Table 3.1. National Ambient Air Quality Standards and Attainment Status for El Centro-Heber-Calexico Corridor

Pollutant	Averaging Period	Federal Standard[a]	Attainment Status
Ozone (O_3)	8-hour	0.075 ppm[b]	Nonattainment
Respirable Particulate Matter (PM_{10})	24-hour	150 µg/m³	Nonattainment
Fine Particulate Matter ($PM_{2.5}$)	24-hour	35 µg/m³	Nonattainment
	Annual	12 µg/m³	Nonattainment
Carbon Monoxide (CO)	1-hour	35 ppm	Unclassified/Attainment
	8-hour	9 ppm	Unclassified/Attainment
Nitrogen Dioxide (NO_2)	1-hour	0.100 ppm	Unclassified/Attainment
	Annual	0.053 ppm	Unclassified/Attainment
Lead (Pb)	Rolling 3-month average[c]	0.15 µg/m³	Unclassified/Attainment
Sulfur Dioxide (SO_2)	1-hour	0.075 ppm	Unclassified/Attainment
	3-hour[d]	0.5 ppm	Unclassified/Attainment
	24-hour	0.14 ppm	Unclassified/Attainment
	Annual	0.03 ppm	Unclassified/Attainment

Notes:
[a] Federal standard levels obtained from the USEPA NAAQS Table. Note that some federal standards include a level (such as the concentrations shown in the Table) and a form (often a statistical form or based on excluding a certain number of exceedances of the standard level over a given number of years). Exceedances of the standard level are not necessarily violations or exceedances of the standard. Available at: https://www.epa.gov/criteria-air-pollutants/naaqs-table. Accessed: May 2019.
[b] 2008 Federal standard level. 2015 federal standard level is 0.070 ppm but attainment designations are pending (http://www.arb.ca.gov/desig/feddesig.htm).

[12] ICAPCD. 2018. *Imperial County 2018 Redesignation Request and Maintenance Plan for Particulate Matter Less Than 10 Microns in Diameter.* Available at: https://www.arb.ca.gov/planning/sip/planarea/imperial/sip.pdf. Accessed: May 2019.
[13] ICAPCD. 2018. *2018 State Implementation Plan for the Imperial County 12 ug/m3 Annual $PM_{2.5}$ Standard.* Available at: https://www.arb.ca.gov/planning/sip/planarea/imperial/final_2018_ic_pm25_sip.pdf. Accessed: May 2019.
[14] ICAPCD. 2017. Imperial County 2017 State Implementation Plan for the 2008 8-hour Ozone Standard. Available at: https://www.arb.ca.gov/planning/sip/planarea/imperial/2017O3sip_final.pdf. Accessed: May 2019.

Table 3.1. National Ambient Air Quality Standards and Attainment Status for El Centro-Heber-Calexico Corridor

[c] Final rule signed October 15, 2008. The 1978 lead standard (1.5 µg/m^3 as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.

[d] This is a secondary standard.

3.2.2 Additional Community Information

Imperial County is located in a primarily desert region of southern California and shares an international border with Mexico. The economy in the region is predominantly tied to agriculture. Agricultural operations can result in emissions from land management activities (e.g., tilling, burning), concentrated animal feeding operations (CAFOs), off-road equipment (e.g., tractors and pumps), on-road vehicles, and unpaved roads. In addition to the agricultural economy, Imperial County also has industrial energy sources and a significant amount of off-highway vehicle (OHV) activity in the outlying desert. Due to its proximity to the international border, there is also a large amount of emissions associated with vehicles idling at and traveling through the international ports-of-entry. In addition to anthropogenic (i.e., "human caused") activities, the area is also susceptible to high wind events, which can lead to elevated concentrations of particulate matter from wind erosion of soils. Table 3.2 below summarizes the types of air pollutants generally associated with the sources discussed above.

Table 3.2. Examples of Key Emission Sources in Imperial County and Associated Pollutants

Emissions Source	Associated Pollutants
Agricultural Activities (tilling)	PM_{10}, $PM_{2.5}$
Agricultural Activities (burning)	$PM_{2.5}$
Concentrated Animal Feeding Operations	PM_{10}, $PM_{2.5}$, methane (CH_4), ammonia (NH_3)
Off-Road Equipment	Combustion By-products[a]
On-Road Vehicles	Combustion By-products[a]
Unpaved Roads	PM_{10}, $PM_{2.5}$
Industrial Energy Production	Combustion By-products[a]
Off-Highway Vehicles	PM_{10}, $PM_{2.5}$
Regional Wind Events	PM_{10}, $PM_{2.5}$

Notes:

[a] Combustion by-products will vary by fuel type but will generally include carbon dioxide, carbon monoxide, sulfur dioxide, nitrogen oxides, particulate matter, and toxics.

Due to measured concentrations of pollutants in the region, OEHHA's CalEnviroScreen 3.0 model[15] ranks portions of the Corridor in the 74th to 78th percentile for ozone, as high as the 95th percentile for particulate matter, and as high as the 96th percentile for asthma incidences. Both ozone and particulate matter have been documented to contribute to asthma and other lung-related diseases.[16] The California Health Interview Survey[17] provides data on the prevalence of both active and lifetime asthma in California. Active asthma prevalence is the proportion of people who have ever been diagnosed with asthma by a healthcare provider and report they still have asthma and/or had an episode or attack within the past 12 months. Lifetime asthma prevalence is the proportion of people who have ever been diagnosed with asthma by a healthcare provider. For 2015-2016, Imperial County had an active asthma prevalence of 12.1% (ranked 8th out of 58 counties in California), and a lifetime prevalence of 15.1% (ranked 23rd). Both prevalence rates are above the respective statewide averages.

3.3 Existing Monitoring Efforts

Within the El Centro-Heber-Calexico Corridor, there are two regulatory monitors and nine community monitors. The community monitors are a part of CCV's Identifying Violations Affecting Neighborhoods (IVAN) network. The locations of all eleven monitors, plus three additional community monitors located adjacent to the Corridor, are presented in Figure 3.1.

3.3.1 Regulatory Monitoring

Existing regulatory monitors within the Corridor include the El Centro monitoring station and the Calexico-Ethel monitoring station. The El Centro monitoring station was installed in 1986 and is maintained by ICAPCD staff. It is located at 150 9th Street in El Centro. The monitoring station is classified as urban and surrounded by government and commercial buildings, with large agricultural areas to the east and west of the El Centro city boundaries. The El Centro monitoring station records measurements for O_3, carbon monoxide (CO), nitrogen dioxide (NO_2), $PM_{2.5}$, and PM_{10}. The Calexico-Ethel monitoring station was installed in 1994 and is operated and maintained by CARB. It is located at 1029 Belcher Street in Calexico. This monitoring station is surrounded by a suburban neighborhood and is approximately 0.75 miles north of the United Sates-Mexico border. The Calexico-Ethel station monitors O_3, CO, NO_2, sulfur dioxide (SO_2), $PM_{2.5}$, PM_{10}, lead (Pb), and toxics. Data from the El Centro and Calexico-Ethel monitors are validated and used to determine the federal attainment status for Imperial County.[18] Both monitoring stations feature meteorological sensors that measure temperature, humidity, wind direction, and wind speed.

[15] Available at: https://oehha.ca.gov/calenviroscreen. Accessed: May 2019.
[16] USEPA. *Asthma and Outdoor Air Pollution*. Available at: https://www3.epa.gov/airnow/asthma-flyer.pdf. Accessed: May 2019.
[17] Additional information on the California Health Interview Survey can be found at: http://healthpolicy.ucla.edu/chis/Pages/default.aspx. Accessed: May 2019.
[18] There are three additional regulatory monitoring stations in Imperial County which are located outside of the Corridor. These include the Brawley monitoring station, the Niland monitoring station, and the Westmorland monitoring station.

Since these monitors are used for regulatory purposes, results are not immediately available to the public. Additionally, some pollutants are only monitored once every three days or once every six days.

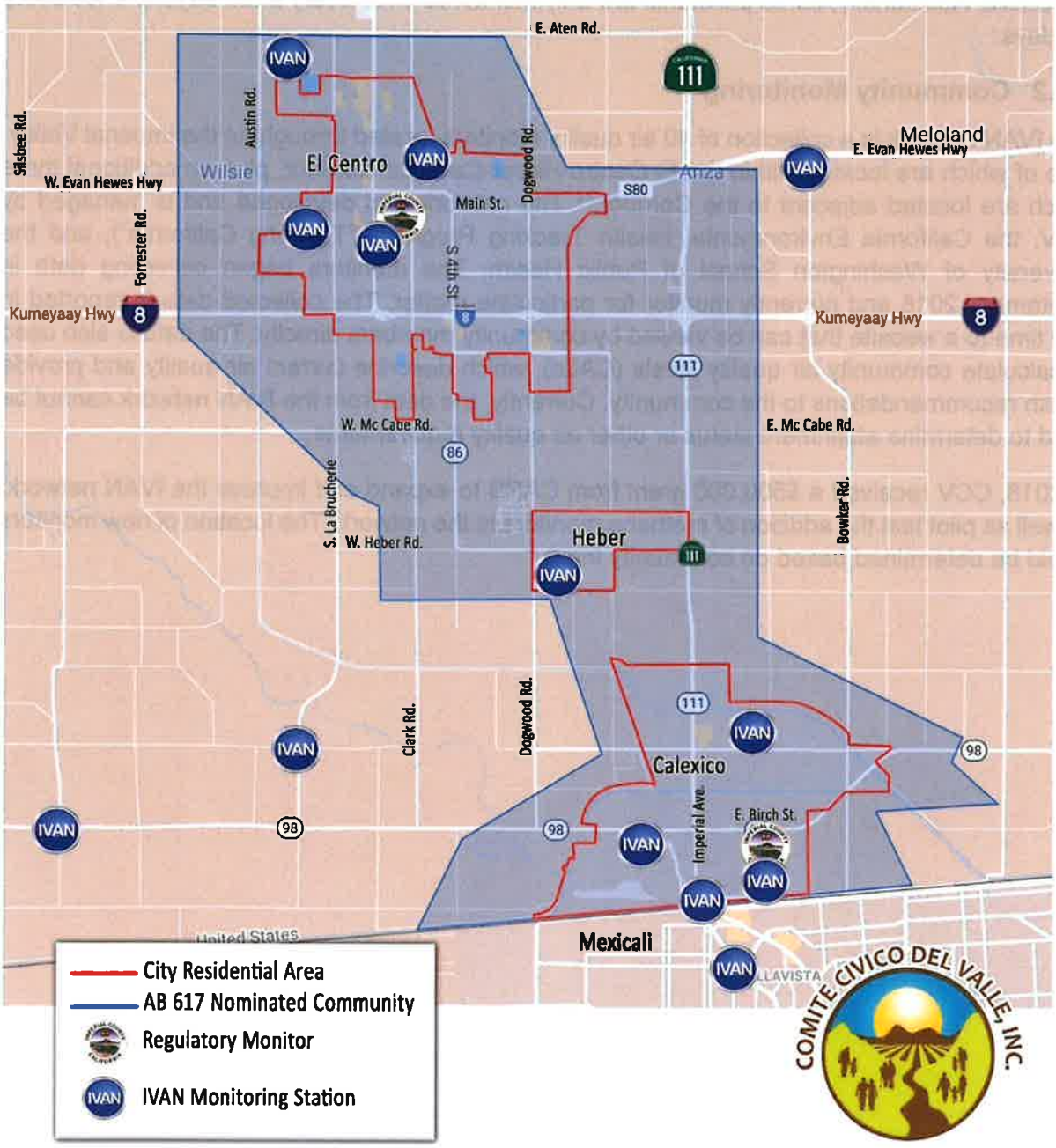
3.3.2 Community Monitoring

The IVAN network is a collection of 40 air quality monitors located throughout the Imperial Valley, nine of which are located within the El Centro-Heber-Calexico Corridor, plus an additional three which are located adjacent to the Corridor.[19] The network was developed and is managed by CCV, the California Environmental Health Tracking Program ("Tracking California"), and the University of Washington School of Public Health. The monitors began collecting data in September 2016 and currently monitor for particulate matter. The collected data is reported in real time to a website that can be viewed by community members directly. The data is also used to calculate community air quality levels (CALs), which describe current air quality and provide health recommendations to the community. Currently, the data from the IVAN network cannot be used to determine attainment status or other air quality requirements.

In 2018, CCV received a $500,000 grant from CARB to expand and improve the IVAN network, as well as pilot test the addition of methane monitors to the network. The location of new monitors would be determined based on community input.

[19] Additional information on the IVAN network can be found at: https://ivanonline.org/. Accessed: May 2019.

Figure 3.1. Locations of Air Quality Monitors in the El Centro-Heber-Calexico Corridor

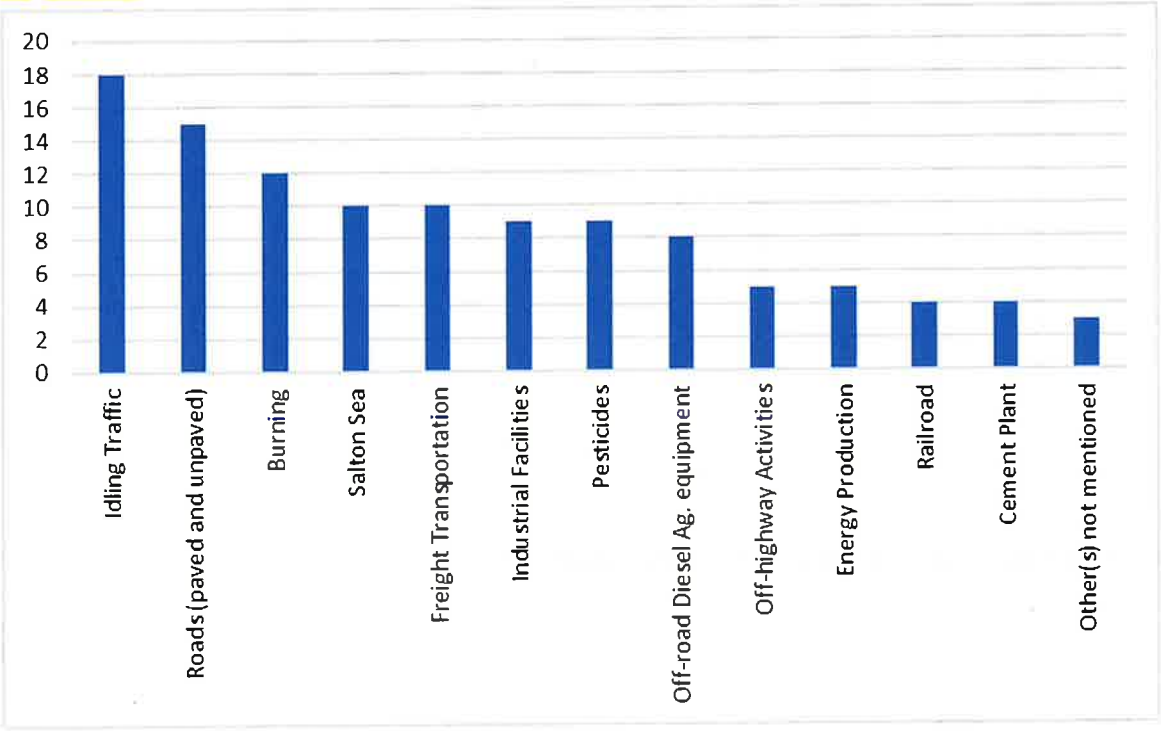


3.4 Community Input

During the fourth Steering Committee meeting, held on January 30, 2019, a survey was presented to the Steering Committee which asked questions relevant to Element 2. These questions included, "What do you think has contributed to worsening air quality in the corridor?", "What pollutants should we monitor?", and "Where in the corridor should we monitor?" The results from this survey are reproduced in Figures 3.2 through 3.4 below and generally show that the Steering

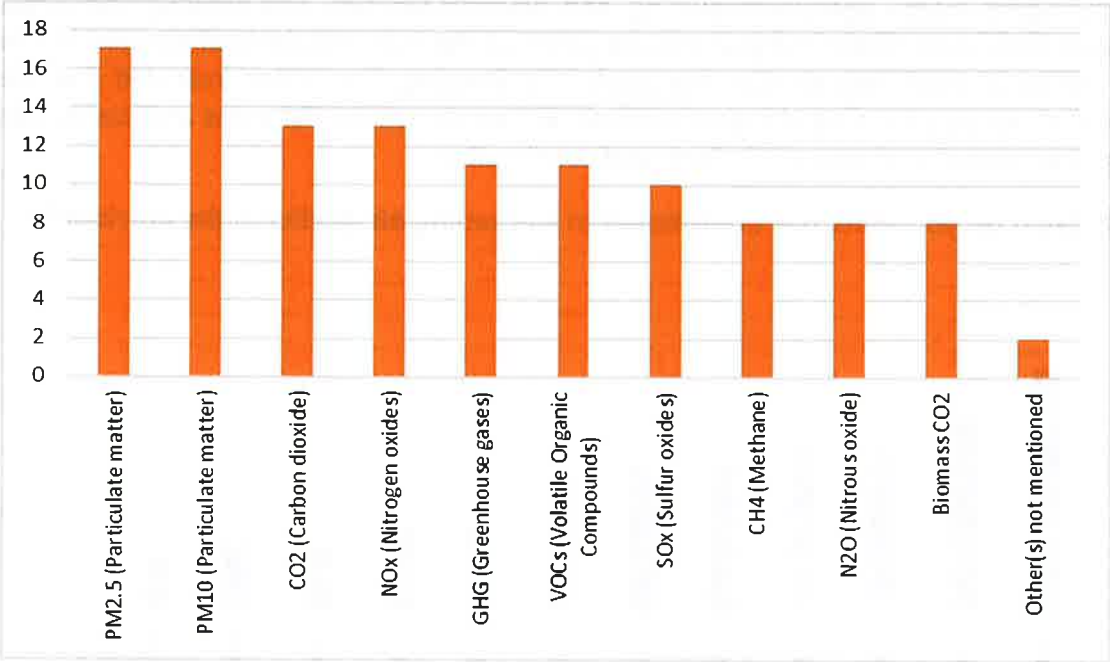
Committee attributes the worsening air quality in the Corridor to emissions from traffic (including paved and unpaved roads), agricultural burning, and industrial facilities. The Steering Committee also identified particulate matter and greenhouse gases as the main pollutants of concern. As far as where potential monitoring should take place, the Steering Committee indicated that the international border was the area of highest interest, with some concern for areas associated with agriculture, the inner city, energy production, and construction.

Figure 3.2. What do you think has contributed to worsening air quality in the corridor?



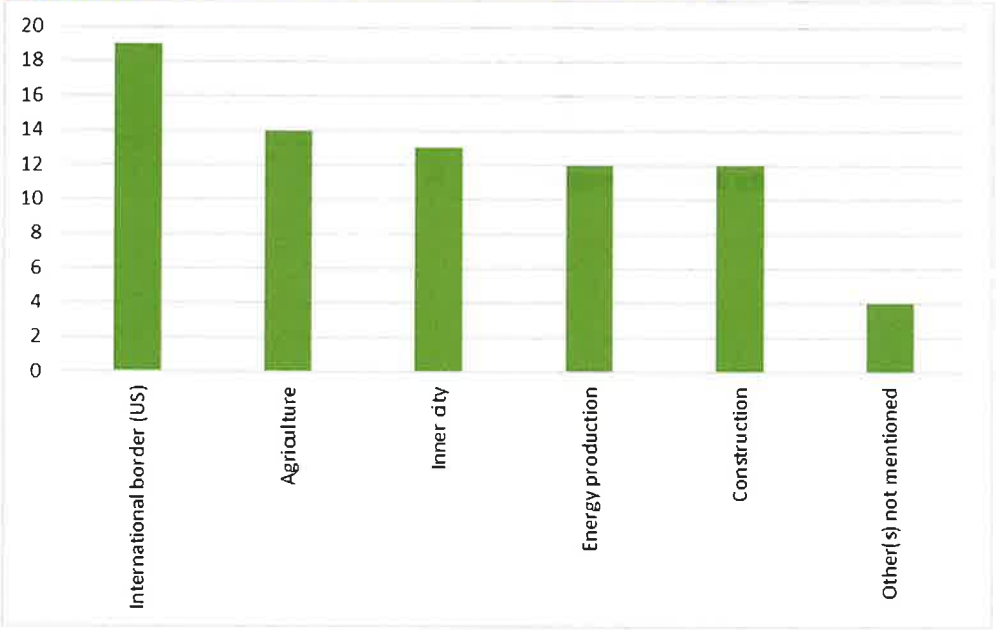
(Data obtained from January 30, 2019 polling of the Steering Committee)

Figure 3.3. What pollutants should we monitor?



(Data obtained from January 30, 2019 polling of the Steering Committee)

Figure 3.4. Where in the corridor should we monitor?



(Data obtained from January 30, 2019 polling of the Steering Committee)

3.5 Potential Alternative Strategies

As part of the Emission Reduction Program, ICAPCD and the Steering Committee are evaluating strategies separate from air quality monitoring that could be used to address some of the Community's priorities and concerns. These may include both emission reduction and exposure reduction strategies. For additional information on these strategies, see the draft plan for the Emission Reduction Program.[20]

[20] Available at: [PLACEHOLDER – LINK FOR DRAFT EMISSION REDUCTION PROGRAM PLAN]

4 Element 3 – Identify Scope of Actions

4.1 Element 3 Overview

Before a monitoring program can be designed, the scope of actions that it will support must be determined so that it can be tailored to the specific initiatives to be pursued. Potential actions to consider could include the development of a real-time air quality notification system, identification of areas that are most heavily burdened by air pollution and tracking medium- and long-term trends in air quality. Each of these actions could require different types of systems to implement and levels of data quality to collect, so pre-determining which will be incorporated into the community air monitoring plan is essential for its design.

4.2 Community Input

At the public Steering Committee meetings conducted concurrent to the drafting of this Plan, discussions were held among members and other citizens of the Community regarding how to best implement the Monitoring Plan. Topics of discussion were carefully selected to generate Community input that would be useful in preparing this Plan in accordance with the 14 elements of the CAPP Blueprint. Among these, Element 3 was explored during the fourth Steering Committee meeting, held on January 30, 2019. Following an introductory presentation by CCV to provide background on the first five elements of the Blueprint, Steering Committee members were split into small groups to discuss their ideas for what goals to set for the Plan's scope of actions and answer the question, "What are we going to do with the data we collect?". The input collected from the Steering Committee during this discussion forms the basis of the scope of action for this Plan.

4.3 Community Goals

During the breakout sessions, each small group discussed their desires for which items to include in the Plan's scope of action and prepared a short list to share with the overall group of meeting attendees. Although the groups held independent discussions, there were many common sentiments among them. Common suggestions for actions to include in the Plan's scope were 1) increased outreach efforts to educate the Community on air quality issues and interpreting basic data and alerts, 2) new or improved systems for notifying the public when pollutant levels are unhealthy, 3) and expanding the existing monitoring network to target areas with higher concentrations of air pollutants (also known as "hotspots"). Each group also discussed which areas within the Community they believed to be hotspots and would be strategic locations for new monitoring stations.

4.3.1 Expansion of Existing Monitoring Network

One objective that was supported by the Steering Committee and Community members present at the meeting was to add more air monitors to complement the existing regulatory and IVAN air monitoring networks. As discussed in Section 3.3, there are currently two regulatory monitors and nine community monitors in the Corridor footprint. The regulatory monitors are generally designed to track regional air quality and are used to determine the attainment status of Imperial County. They are subject to rigorous quality assurance/quality control (QA/QC) requirements and thus

produce high-quality data. Ultimately, these monitors can be used to track the progress of the Emission Reduction Program.

On the other hand, the existing community monitors, which are part of the IVAN network, provide a neighborhood-level representation of air quality. These monitors are able to provide a stream of localized air quality data in the form of particulate matter air concentration measurements recorded every five minutes. While this data is useful, it may not represent all of the areas of interest in the Community. Particulate levels can vary over small distances, so a higher density of monitors could help provide a more precise picture of the air quality conditions in the Community at any given time. Installing additional monitors at strategic locations would allow for the collection of a more robust data set that could be used to notify citizens of unhealthy air quality conditions when it is more likely to directly affect them. During the small group discussions of Steering Committee Meeting 4, attendees listed some of the areas where they would like to see more air monitors. These areas included roads and intersections with high traffic densities, the region along the United States-Mexico border (with an emphasis on ports-of-entry), and those near specific, large stationary sources such as cattle feedlots.

The Steering Committee is also considering ways in which additional monitoring could complement an expanded community monitoring network. One option that is being considered involves stationing high-grade monitoring equipment on a mobile monitoring platform (e.g., a trailer or van). This setup could be designed to monitor for a wide range of pollutants and allow the District to address a broad range of air quality concerns. While this method would provide greater insight to the Community on air quality issues, it could also require more resources and present certain logistical challenges. More details on the specific air monitoring objectives are presented in Chapter 5.

4.3.2 Notification Systems

The topic of utilizing real-time air monitoring data to notify the Community when pollutant levels are unhealthy was brought up by many attendees of Steering Committee Meeting 4. While there are already some applications and alert systems in place as part of ICAPCD's regulatory network and the IVAN network, many community members felt it could be improved upon. An improved system for handling monitoring data and alerting the public could be implemented along with the expansion of the existing monitoring network. One possibility would be to utilize GPS systems and mobile phone applications to alert Community members of unhealthy pollutant levels based on their current location. This option would become increasingly useful as more monitors are added to the network and more precise data becomes available. Attendees of the Steering Committee meeting expressed interest in a notification system that is more localized, user friendly, and able to provide data to users that is accessible in a timely manner (i.e., as soon as possible after air pollutant levels become unhealthy). An improved notification system that works with existing and newly installed monitors could satisfy this goal. This system could also be linked to the local school flag program, which looks to advertise the air quality conditions of the day through a flag or other visual (e.g., a marquee).

4.3.3 Education and Outreach

While not explicitly related to air monitoring, members of the Community expressed interest in including education and outreach activities in the scope of action for the Plan. Suggested topics for public education included:

- Interpreting air quality data;
- How poor air quality can impact health; and
- Understanding the difference between community monitoring and regulatory monitoring and their associated indices.

There is a lot of complicated science and regulatory jargon involved with air quality monitoring and regulation, so making this information more digestible for the Community could broaden the impact of air monitoring. The goal of the Plan is ultimately to promote public health and welfare, so efforts must be made to ensure that members of the Community understand how to use the information generated for their own benefit.

4.4 Potential Future Goals

Air quality data collected through an expanded monitoring network in the Community will be useful for developing and improving notification systems, as discussed. However, additional uses for the data will also be explored in the coming years. For example, as more long-term data is collected, there will be opportunities for data analysis and trend identification using the community monitors, rather than through the regulatory monitors alone. In addition, the potential role of additional monitoring and ways in which it can complement an expanded community monitoring network will continue to be evaluated.

5 Element 4 – Define Air Monitoring Objectives

5.1 Element 4 Overview

Related to the scope of actions described in Element 3, specific air monitoring objectives must also be determined ahead of Plan development, as they inform the technical needs for data collection and analysis. Having clearly defined goals simplifies the process for evaluating the progress of the Monitoring Plan and ensuring that the Community is on track to complete its goals by the specified deadlines. The CAPP Blueprint suggests objectives that community monitoring plans may want to incorporate, such as determining which specific areas are experiencing disproportionate burdens from air pollution, identifying specific sources and measuring or estimating their emissions, and making real-time air quality data available to the community. In addition to the air monitoring objectives, the Blueprint describes how monitoring plans should include objectives for collecting other types of data, such as meteorological data and tracking of pollutants not on the CAP or TAC lists. Finally, if there already exists a monitoring program in the community, plans should document their current scope and explain how new monitoring efforts will be employed to expand or complement them.

5.2 Air Monitoring Objectives for this Plan

As stated in Chapter 2 of this Plan, the community-specific purpose for air monitoring is defined by the Community's desire to 1) formally track the progress of the Emission Reduction Program and 2) provide higher resolution real-time air quality data that is easy to understand and access. For the Community, the pollutants of concern are particulate matter (PM_{10} and $PM_{2.5}$) and ozone. In recent years, these pollutants have exceeded their respective NAAQS in Imperial County, triggering the requirement to prepare SIPs. While the efforts laid out in the SIPs have begun addressing the issue at a regional level, implementation of this Plan will push the efforts further while focusing on improving air quality in the El Centro-Heber-Calexico Corridor specifically. To accomplish this, the Plan establishes the following main air monitoring objectives: to utilize the data collected by the regulatory monitors to track the progress of the Emissions Reduction Program; to implement sufficient monitoring to be able to provide real-time air quality data to the Community that is easy to understand and covers a greater area with increased resolution compared to the current monitoring networks; and to leverage additional complementary monitoring (yet to be defined).

It is important to note that the first two air monitoring objectives of the Plan focus only on particulate matter pollution. The existing community monitors in the Corridor only monitor PM_{10} and $PM_{2.5}$ concentrations and the newly installed AB 617 Community Monitors will follow suit. The regulatory monitors track a broader suite of pollutants, including ozone. However, the reason that ozone will not be monitored as part of the Plan despite it being a known issue in Imperial County is because of the nature of ozone formation. Ground-level ozone in the atmosphere is formed over time by the reaction of precursor pollutants rather than being directly emitted by sources. The complex chemical reactions that form ozone occur on a regional scale, widely dispersed from wherever the precursors were originally emitted. In contrast, particulate matter (and specifically $PM_{2.5}$) in the atmosphere is the result of both regional and localized emissions. Thus, targeted emissions reductions on a local scale can reduce particulate exposure in overburdened areas in

a way that reductions of ozone precursor emissions cannot. For this reason, the air monitoring objectives of the Plan focus on particulate matter.

Similarly, while the Steering Committee expressed interest in monitoring greenhouse gases (e.g., carbon dioxide and methane) as part of the Plan (as described in Section 3.4), that issue is better handled on a regional or even global scale. Elevated greenhouse gas concentrations in the atmosphere represent a legitimate concern with regard to climate change, but they often do not cause direct health impacts. Considering the mechanism and scale of how greenhouse gas emissions impact the environment, monitoring at the community level does not present a benefit in line with the objectives of this Plan. Nevertheless, CCV is conducting a pilot program to monitor methane which has the potential to address this Community concern.

The additional complementary monitoring could be designed to monitor for a wider range of pollutants; however, that level of detail is yet to be determined by the Steering Committee.

5.2.1 Monitoring Design

The existing regulatory monitors have been designed and sited according to the requirements outlined in Title 40 Part 58 of the Code of Federal Regulations (CFR). As a result, no change to the design of the regulatory monitors is being proposed as part of this Plan. To facilitate the comparison of data and leverage the knowledge gained from the IVAN network, the AB 617 Community Monitors would be similar in design to the IVAN monitors. They would be programmed to measure and record both PM_{10} and $PM_{2.5}$ levels. Using telemetry technology, the data collected at each monitor would be transmitted to a database for recordkeeping and analysis. One key analysis would be to compute an average concentration for each type of particulate matter that is consistent with the averaging times used for the NAAQS. The NAAQS or a fraction thereof could then be used as an action level which when exceeded, triggers an automated community notification system. The goal would be to maintain these monitoring efforts indefinitely so long as there remains interest and support among members of the Community. More detailed information on the Plan's monitoring methods and equipment can be found in Chapter 8.

5.2.2 Locations for New Monitors

As mentioned above, the existing regulatory monitors have been designed and sited according to the requirements outlined in 40 CFR Part 58. As a result, no change to the location of the regulatory monitors is being proposed as part of this Plan. In regards to the AB 617 Community Monitors, on several occasions the Steering Committee was polled for their input on possible monitor locations. Based on the input received, Steering Committee members seemed to prioritize location selection based on two main factors: proximity to potential pollutant hotspots and proximity to sensitive receptors. Among the suggestions were to install new monitors along the United States-Mexico border (with emphasis on ports-of-entry), near high traffic areas where vehicles travel and idle, and near high populations of sensitive receptors like children and the elderly. These comments collected were considered along with another factor, distance to the nearest existing monitor, so that areas not covered by the current monitoring networks would be prioritized. Eventually, locations were selected for the installation of new monitors. More details on these specific locations are provided in Chapter 9 of this Plan.

5.3 Additional Data

Data gathered from other sources aside from the regulatory and AB 617 Community Monitors will be useful for implementing the Plan and assessing its progress. In particular, the Imperial County SIPs for $PM_{2.5}$ and PM_{10} provide a detailed insight into the particulate matter situation in the region, pre-AB 617. While not specific to the Corridor, the SIPs contain a trove of information related to current and historic levels of ambient particulate matter, emissions inventories, and control measures for mitigating emissions. Data from the SIPs will provide a general baseline level for ambient concentrations of particulate matter which can be compared against future measurements collected by the regulatory and AB 617 Community Monitors.

In addition to past data obtained from the SIPs, ongoing meteorological ("met") data collection will be useful for the Plan. As of now, the number of stations actively collecting met data around the Community is adequate for meeting the monitoring objectives. There are currently four stations collecting met data that are located within the El Centro-Heber-Calexico Corridor. Two of these are associated with the regulatory monitors in Calexico and El Centro. These stations monitor wind direction and speed. There are also two met stations in the Community, again one in Calexico and one in El Centro. These stations monitor a variety of met conditions, including air temperature, humidity, wind speed and direction, and precipitation. While these four stations provide adequate geographical coverage for supporting the air monitoring objectives of the Plan, the potential addition of more met stations may be evaluated in the future.

5.4 Evaluating Plan Progress

Progress of the Plan will be periodically assessed to ensure that its goals are being met in a timely manner. The Plan will be evaluated against a set of benchmarks selected to gauge its progress. The first major milestone is the completion of the written Monitoring Plan, i.e. this Plan. This Plan was drafted during the first half of 2019 and completed ahead of the June 30, 2019 goal date. The Plan lays out how data from the regulatory monitors will be analyzed and how the AB 617 Community Monitors will be designed, where they will be located, and how the data collected by them will be handled. The following benchmarks have been established for the regulatory monitors and AB 617 Community Monitors:

1. At the end of each calendar year for the next five years, particulate matter data from the El Centro and Calexico regulatory monitors will be analyzed to evaluate the progress of emission reduction strategies under the Emission Reduction Program.

2. Within six months of the completion of the Monitoring Plan, 50 percent of AB 617 Community Monitors will be installed and transmitting data. Within twelve months of completion of the Monitoring Plan, 100 percent of proposed AB617 Community Monitors will be installed and transmitting data.

3. After collecting data from the AB 617 Community Monitors for six months, the placement of monitors and the need for further expansion of the network will be evaluated. Placement of monitors will be re-evaluated every six months thereafter.

6 Element 5 – Establish Roles and Responsibilities

6.1 Element 5 Overview

Following the identification of monitoring objectives, the next step is to establish roles and responsibilities for all major aspects of the Monitoring Plan. The CAPP Blueprint describes how the Plan should specify the individual tasks, duties, and training that participants should complete as they work towards accomplishing air monitoring objectives. These responsibilities should be tailored to each role that individuals or groups take on. Completing this step is essential for ensuring that all aspects of the Monitoring Plan are assigned to willing and competent individuals so that their progress can be tracked as the overall group works towards development and implementation of the Monitoring Plan. To achieve the goal for this element of the Plan, an organizational chart was developed and is presented below in Figure 6.1.

Figure 6.1. El Centro-Heber-Calexico Corridor Community Monitoring Organizational Chart

[PLACEHOLDER]

6.2 Parties Involved

Developing the Plan has been a collaborative effort with many different parties involved. Initially, CARB was the body to select the El Centro-Heber-Calexico Corridor as an AB 617 Community following a nomination prepared by ICAPCD and CCV. These two local organizations took the lead on forming the Community Steering Committee and authoring the Plan. Support from contractors was also solicited as necessary, to assist with aspects of the development and implementation of the Plan requiring particular expertise. This included equipment vendors, software application developers, and environmental consultants. The following sections describe in further detail the roles and responsibilities of these groups.

6.2.1 Community Steering Committee Responsibilities

Based on the Steering Committee's charter, their role is to "support active community involvement and collaboration in the development of the Program by providing a forum for identifying community issues and potential solutions with all relevant parties". This was done mainly through the hosting of Steering Committee meetings, held at least once per month since the initial planning stages of the Plan in late 2018. The Charter also lists out a more specific set of responsibilities which include providing recommendations to the ICAPCD Governing Board for approaches for community engagement and outreach, Plan targets and strategies, and Plan enforcement, among others. Essentially, the Steering Committee was tasked with overseeing development of the Plan while continuing to engage not only with ICAPCD and CCV, but also with the Community members, to ensure that their concerns were heard and addressed by the Plan.

6.2.2 ICAPCD Responsibilities

From a technical standpoint, ICAPCD is the authority for air quality matters in Imperial County. Their knowledgeable and capable staff oversee the County's regulatory monitoring network and are responsible for preparing the County's SIPs, which are comprehensive plans for addressing air pollution in the region. Through decades of research, enforcement, and data collection,

ICAPCD has developed extensive knowledge of the various pollution sources across Imperial County. A substantial part of SIP development is analyzing available control measures and determining how best to implement or enhance them to effect permanent emission reductions. When the time comes to begin instituting emission reduction strategies in the Community as part of AB 617, ICAPCD will be well positioned to assist and advise. They will be able to take advantage of their knowledge of control measures and how they might intersect with the various rules, laws, and control measures already implemented by federal, state, and their own District actions. It will be the responsibility of ICAPCD to support CCV and the Steering Committee with this knowledge toward the successful execution of the Plan.

6.2.3 CCV Responsibilities

The local environmental justice organization, CCV, will play an integral role in Plan implementation, particularly regarding community air monitoring. CCV has valuable experience with low-cost, community air monitoring, having developed the IVAN network. As the AB 617 Community Monitors will be similar in design to the IVAN monitors, CCV's knowledge of monitor siting and data handling will be advantageous for a successful and efficient execution of these aspects of the Plan. Additionally, CCV has extensive experience working closely with the Community on environmental matters. They understand the nuances of the air quality issues in Imperial County and the specific concerns that Community members have. The connections that CCV has made within the Community will be invaluable in conducting outreach and galvanizing involvement by Community members.

6.2.4 Community Involvement

Community-based action is a central tenant of AB 617. Keeping this in mind, the Steering Committee made sure Community members had the opportunity to be involved in Plan development every step of the way. In fact, the Steering Committee members were selected with the expectation that they would communicate with and voice the sentiments of their fellow Community members. In addition, Community members were invited to every public Steering Committee meeting and encouraged to voice their opinions during public comment and workshop activities. In the end, this produced a monitoring plan that truly belonged to the Community, designed to address its personalized air quality needs.

7 Element 6 – Define Data Quality Objectives

7.1 Element 6 Overview

Obtaining quality data from an air monitoring network is essential to achieving the objectives defined in Element 4 of this Plan. The CAPP Blueprint describes the types of data quality indicators one may want to consider when developing an air monitoring network, including precision, bias, accuracy, sensitivity, completeness, and representativeness. Defining data quality objectives is essential for determining the appropriate technology to use for monitoring.

7.2 Data Quality Objectives for Regulatory Monitors

To evaluate the progress of the Emission Reduction Program, the Steering Committee is proposing to use established regulatory monitors that have been designed to collect data for comparison against the NAAQS. There are currently two regulatory monitoring stations within the Corridor, one in El Centro and one in Calexico. At the El Centro monitoring station, ICAPCD currently operates two particulate matter monitors: one Federal Equivalent Method (FEM) PM_{10} monitor (Met One Instruments Beta Attenuation Mass 1020 [Met One BAM1020]) and one Federal Reference Method (FRM) $PM_{2.5}$ monitor (Rupprecht & Patashnick Co., Inc Partisol-Plus Model 2025 Sequential Air Sampler [R & P 2025]).[21] At the Calexico monitoring station, CARB currently operates four particulate matter monitors: one FEM PM_{10} monitor (Met One BAM 1020), two FRM $PM_{2.5}$ monitors (R & P 2025) (one primary and one collocated for quality control), and one additional $PM_{2.5}$ monitor (Met One BAM 1020).[22] The data quality objectives of these monitors is broadly established by 40 CFR Part 58, Appendix A.[23] Data quality objectives are further called out in 40 CFR Part 53 for particulate matter FEM monitors and 40 CFR Part 50, Appendix L for $PM_{2.5}$ FRM Monitors.[24,25]

7.2.1 Data Quality Indicator – Precision

Precision refers to the measure of agreement between multiple measurements of a device under consistent conditions, regardless of accuracy. For example, if a monitor is subjected to the same conditions for two separate measurements, the precision would be the difference between the resulting measurement from each recording. 40 CFR Part 53 Subpart D requires that the precision of PM_{10} monitors be at least 5 $\mu g/m^3$ or 7 percent. 40 CFR Part 50, Appendix L requires that $PM_{2.5}$ collocated sampler results be used to assess measurement system precision on a quarterly and annual basis. Operational precision of the $PM_{2.5}$ monitoring data should be 10 percent or better.

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[21] CARB Annual Network Plan, June 2018. Available at: https://www.arb.ca.gov/aqd/amnr/amnr2018appa.pdf Accessed: May 2019
[22] Ibid.
[23] 40 CFR Part 58, Appendix A. Available at: https://www.law.cornell.edu/cfr/text/40/appendix-A_to_part_58. Accessed: May 2019
[24] 40 CFR Part 53. Available at: https://www.law.cornell.edu/cfr/text/40/part-53. Accessed: May 2019
[25] 40 CFR Part 50, Appendix L. Available at: https://www.law.cornell.edu/cfr/text/40/appendix-L_to_part_50. Accessed: May 2019

7.2.2 Data Quality Indicator – Bias

Bias indicates if measurements systematically or persistently cause error in a single direction. For example, a certain type of monitor may consistently measure 5% higher than a known standard. The tendency of the monitor to read at 5% higher than the known standard is the bias.

Performance Evaluation Program (PEP) procedures are an independent assessment used to estimate total measurement system bias for $PM_{2.5}$ monitors. These performance evaluations are generally performed annually. A performance evaluation audit is considered valid if both the primary monitor and the PEP audit concentrations are valid and above 3 $\mu g/m^3$. Calculations for evaluating bias between the primary monitor and the performance evaluation monitor for $PM_{2.5}$ are described in Section 4.2.5 of 40 CFR Part 50, Appendix A. For $PM_{2.5}$ methods, the total bias should be ±10 percent. Flow rate bias must be assessed quarterly and annually for $PM_{2.5}$ monitors, as required by 40 CFR Part 50, Appendix L.

The flow rate bias of PM_{10} monitoring methods is calculated as described in Section 4.2.2 of 40 CFR Part 50, Appendix A. While the flow rate bias must be assessed on at least a semi-annual basis, the CFR does not establish bias requirements for PM_{10} monitors.

7.2.3 Data Quality Indicator – Accuracy

Accuracy is the ability of the monitor to detect values that agree with a known value. This is typically measured in a laboratory setting, where a monitor may be exposed to a known concentration of pollutant. Accuracy of $PM_{2.5}$ monitors is based on quarterly results from the primary and a collocated monitor. Flow rate accuracy must be assessed periodically for $PM_{2.5}$ monitors and must have an accuracy of ±2 percent, as required by 40 CFR Part 50, Appendix L.

The accuracy of PM_{10} monitors is difficult to determine due to the range in particle size. 40 CFR Part 50, Appendix J specifies that the expected mass concentration for the monitor be within ±10 percent of an ideal sampler. Additionally, the particle size for 50 percent sampling effectiveness is required to be 10 ±0.5 micrometers. Flow rate accuracy must be assessed periodically for PM_{10} monitors and must have an accuracy of ±2 percent, as required by 40 CFR Part 53 Subpart D.

7.2.4 Data Quality Indicator – Sensitivity

Sensitivity is the level of detail that can be detected by the monitor instrument or method. As specified by 40 CFR Part 50, Appendix J, PM_{10} monitors should be able to measure 24-hour concentrations of at least 300 $\mu g/m^3$ when the flow rate is within the specified limits. The Met One BAM 1020 monitor has an hourly lower detection limit of less than 4.8 $\mu g/m^3$, and a 24-hour lower detection limit of less than 1.0 $\mu g/m^3$.[26] $PM_{2.5}$ gravimetric analysis is performed by a CARB-certified laboratory. The microbalances at the laboratory are required to measure to the nearest

[26] Met One Instruments, Inc. BAM 1020 Particulate Monitor Operation Manual Revision U. Available at: https://metone.com/wp-content/uploads/2019/04/BAM-1020-9800-Manual-Rev-U.pdf. Accessed: May 2019

0.001 mg (1 µg).[27] The lower detection limit of the mass concentration range specified by 40 CFR Part 50 Appendix L is approximately 2 µg/m^3.

7.2.5 Data Quality Indicator – Completeness

Completeness is the amount of valid data obtained by the measurement system compared to the amount that was expected to be obtained under correct, normal conditions. While there are no completeness requirements specified by 40 CFR Part 58, Appendix A, when using monitoring data to compare against the $PM_{2.5}$ and PM_{10} NAAQS, the data completeness requirement is 75%.[28,29]

7.2.6 Data Quality Indicator – Representativeness

Representativeness is a qualitative indicator that demonstrates how accurately and precisely data represents a measured condition in order to meet a specific monitoring objective. 40 CFR Part 50, Appendix L, requires that all factors related to the validity or representativeness of the sample, such as sampler tampering, malfunctions, unusual meteorological conditions, construction activity, fires, or dust storms must be recorded. These flags are used to determine the need for review of QC data by a quality assurance officer

7.3 Data Quality Objectives for AB 617 Community Monitors

As mentioned in Section 5.2.1, to facilitate the comparison of data and leverage the knowledge gained from the IVAN network, the AB 617 Community Monitors would be similar in design to the IVAN monitors. The IVAN monitors currently utilize Dylos DC1700 units, which are low-cost air quality sensors that use a light-scattering particle counter to measure particle counts. In establishing the data quality objectives for the AB 617 Community Monitors, one can look to the data quality achieved by the Dylos DC1700 units. Table 7.1 below summarizes data quality information regarding the Dylos DC1700 units. Some of this information was obtained from the manufacturer, while some was obtained from field studies performed by CCV and the South Coast Air Quality Management District (SCAQMD).

Table 7.1. Data Quality Information for Dylos DC1700 Air Quality Sensors

Data Quality Indicator	Description
Precision	Field tests performed by the SCAQMD[a] have shown low intra-model variability for the mass concentrations of $PM_{2.5}$ and PM_{10}.

[27] USEPA. Quality Assurance Guidance Document 2.12. – Monitoring $PM_{2.5}$ in Ambient Air Using Designated Reference or Class I Equivalent Methods. Available at: https://www3.epa.gov/ttnamti1/files/ambient/pm25/qa/m212.pdf. Accessed: May 2019..

[28] 40 CFR Part 50, Appendix N. Available at: https://www.law.cornell.edu/cfr/text/40/appendix-N_to_part_50. Accessed: May 2019.

[29] 40 CFR Part 50, Appendix K. Available at: https://www.law.cornell.edu/cfr/text/40/appendix-K_to_part_50. Accessed: May 2019.

Table 7.1. Data Quality Information for Dylos DC1700 Air Quality Sensors

Data Quality Indicator	Description
Bias	During the field validation of the IVAN monitors[b] the observed bias ranged from 28.3% to -31.4%, when the Dylos DC1700 units were evaluated against Environmental Beta Attenuation Mass (E-BAM) monitors.
Accuracy	When compared against high-accuracy FRM and FEM monitors, the Dylos DC1700 units have shown R^2 (i.e., correlation) values between 0.70 and 0.80.[b]
Sensitivity	Custom firmware allows the Dylos DC1700 units to measure particles at four different sizes: >0.5 micrograms (µg), >1.0 µg, >2.5 µg, and >10 µg.
Completeness	A minimum data completeness level of 75% is generally sought when air quality monitoring data is used for analysis and comparison against air quality standards.
Representativeness	The high correlation observed between the Dylos DC1700 units and high-accuracy monitors[b] indicate that data collected from the Dylos DC1700 units are reasonably representative of real-time conditions.

Notes:

[a] SCAQMD. AQ-SPEC Field Evaluation of Dylos DC1700. Available at: http://www.aqmd.gov/docs/default-source/aq-spec/field-evaluations/dylos-dc1700-pm---field-evaluation.pdf?sfvrsn=12. Accessed: May 2019.

[b] Graeme N. Carvlin, Humberto Lugo, Luis Olmedo, Ester Bejarano, Alexa Wilkie, Dan Meltzer, Michelle Wong, Galatea King, Amanda Northcross, Michael Jerrett, Paul B. English, Donald Hammond & Edmund Seto (2017). Development and field validation of a community-engaged particulate matter air quality monitoring network in Imperial, California, USA, Journal of the Air & Waste Management Association, 67:12, 1342-1352, DOI: 10.1080/10962247.2017.1369471.

7.4 Data Quality Objectives for Complementary Monitoring

The data quality objectives for complementary monitoring will be discussed and decided upon by the Steering Committee in the second half of 2019.

8 Element 7 – Select Monitoring Methods and Equipment

8.1 Element 7 Overview

After determining the data quality needs of the monitoring devices, the actual equipment and methods can be selected. Air monitoring methods refer to air monitoring equipment and how it is operated and applied. Air monitoring equipment is specifically the technology used for air monitoring.

8.2 Monitoring Methods and Equipment for Regulatory Monitors

There are currently two regulatory monitoring stations within the Corridor, one in El Centro and one in Calexico. Table 8.1 below summarizes the particulate matter monitoring equipment at these stations.

Table 8.1. Particulate Matter Monitoring Equipment at the El Centro and Calexico Monitoring Stations

Station	Pollutant Monitored	Monitor Description
El Centro	PM_{10}	One (1) Met One BAM 1020 monitor designed and sited with the objective to monitor population exposure for comparison to the NAAQS. Data is collected continuously at 1-hour intervals.
	$PM_{2.5}$	One (1) R & P 2025 monitor designed and sited with the objective to monitor population exposure for comparison to the NAAQS. Data is collected every third day.
Calexico	PM_{10}	One (1) Met One BAM 1020 monitor designed and sited with the objective to measure the highest concentrations in the region for comparison to the NAAQS. Data is collected continuously at 1-hour intervals.
	$PM_{2.5}$	Two (2) R & P 2025 monitors. One monitor is designed and sited with the objective to monitor population exposure for comparison to the NAAQS. Data is collected daily. The other monitor is included for quality assurance audit purposes. Data at that monitor is collected every twelfth day.
		One (1) Met One BAM 1020 with sharp cut cyclone designed and sited with the objective to monitor population exposure for public information. Data is collected continuously at 1-hour intervals.

8.2.1 PM_{10} Monitoring Methods and Equipment

The Met One BAM 1020 monitors used to collect PM_{10} concentration data measure particulate concentration using beta ray attenuation. This method is designated as a federal equivalent method (i.e., FEM) by the USEPA and therefore meets the data quality objectives outlined in Chapter 7. The Met One BAM 1020 monitors collect a new sample every hour. During the first

four minutes of sample collection, the Met One BAM 1020 counts the number of beta particles that pass through a clean filter after being emitted by a small Carbon 14 (C-14) beta radiation-emitting source. Then, the filter is moved to the air inlet, where particulate-laden air is pumped through the filter for fifty minutes. During the last four minutes of sampling, the Met One BAM 1020 counts the number of beta particles which pass through the now dirty filter. The difference in beta particles and the volume of air sampled are used to calculate the concentration of PM_{10} on the filter. The instrument can be affected by changes in temperature, barometric pressure, and relative humidity. Therefore, during collection of the air sample, the Met One BAM 1020 also does automatic span checks to prevent measurement drift caused by these parameters.[30]

Standard operating procedures (SOPs) for the Met One BAM 1020 can be found on CARB's Air Monitoring Web Manual for Particulate Standard Operating Procedures.[31] According to the SOPs, the Met One BAM 1020 should be kept clean and dust-free. The PM_{10} inlet should be thoroughly cleaned on a monthly basis with a lint-free cloth and O-rings inspected and replaced as needed.

8.2.2 $PM_{2.5}$ Monitoring Methods and Equipment

The R & P 2025 monitors used to collect $PM_{2.5}$ concentration data measure particulate concentration using gravimetric analysis. The El Centro station uses the R & P 2025 with a well impactor 96 and the Calexico station uses the R & P 2025 with a very sharp cut cyclone (VSCC). Both methods are designated as federal reference methods (i.e., FRMs) by the USEPA and therefore meet the data quality objectives outlined in Chapter 7. The R & P 2025 collects samples every 24 hours on a 47 millimeter diameter filter cassette. The cassettes are weighed prior to sampling to obtain the tare weight. During sampling, air containing particulates passes through the filter and deposits the particulates on the filter. The cassette is then weighed after sampling. The pre-sampling and post-sampling weights are determined by a CARB-certified laboratory. The difference in the weight and the volume of air sampled are used to calculate the concentration of $PM_{2.5}$ during the sampling period. The gravimetric analysis is affected by the following limitations[32]:

- Flow rate through the sampling inlet and filter assembly
- Weight changes due to:
  - Chemical reactions and volatilization;

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[30] CARB. BAM 1020 Particulate Monitor Operation Manual. Available at: https://www.arb.ca.gov/airwebmanual/instrument_manuals/Documents/BAM-1020-9800_Manual_Rev_U.pdf. Accessed: May 2019.

[31] CARB. Standard Operating Procedures for Met-One Instruments Beta Attenuation Mass Monitor (BAM-1020). Available at: https://www.arb.ca.gov/airwebmanual/aqsbdocs1/400sop200306.pdf?_ga=2.134865457.1329027809.1557760596-483290622.1543507065. Accessed: May 2019.

[32] USEPA. Quality Assurance Guidance Document 2.12 – Monitoring $PM_{2.5}$ in Ambient Air Using Designated Reference or Class I Equivalent Methods. Available at: https://www3.epa.gov/ttnamti1/files/ambient/pm25/qa/m212.pdf. Accessed: May 2019.

  - Filter mishandling resulting in removal of particles from the filter during weight analysis;
  - Absorption or desorption of water vapor on the filter.
- Electrostatic charges on filter during manufacture or sampling.

The effects of these limitations can be mitigated by maintaining appropriate temperature, barometric pressure, and relative humidity. SOPs for the R & P 2025 can be found on CARB's Air Monitoring Web Manual for Particulate Standard Operating Procedures.[33] Laboratory SOPs for filter cassette preparation and gravimetric analysis can also be found on CARB's webpage.[34] The equipment should be kept clean and dust-free.

The Met One BAM 1020 used for the $PM_{2.5}$ continuous monitor measures particulate matter concentrations using beta ray attenuation, with a sharp cut cyclone to separate $PM_{2.5}$ from other particulate sizes. This method is not a FRM or FEM for $PM_{2.5}$. However, the $PM_{2.5}$ Met One BAM 1020 is required to follow QA/QC procedures approved by the USEPA. Therefore, this monitor meets the data quality objectives outlined in Chapter 7. For details on how the Met One BAM 1020 operates and the limitations of the monitor, see Section 8.2.1.

SOPs for the Met One BAM 1020 can be found on CARB's Air Monitoring Web Manual for Particulate Standard Operating Procedures.[35] According to the SOPs, the Met One BAM 1020 should be kept clean and dust-free. The $PM_{2.5}$ cyclone should be thoroughly cleaned on a monthly basis with a lint-free cloth and O-rings inspected and replaced as needed.

8.3 Monitoring Methods and Equipment for AB 617 Community Monitors

As mentioned in Section 5.2.1, to facilitate the comparison of data and leverage the knowledge gained from the IVAN network, the Steering Committee is proposing to use similar or identical equipment as the existing IVAN monitors, which currently feature Dylos DC1700 air quality sensors and custom relative humidity and temperature sensors with a microcontroller board. These units can be customized by CCV, which could save time in their development and installation.

Dylos DC1700 units use a light-scattering particle counter to measure particulate matter counts. These units could be modified to enable wireless internet connectivity and count particles in four size bins (>0.5 µg, >1.0 µg, >2.5 µg, and >10 µg). The particle counts could then be converted to

[33] CARB. Standard Operating Procedures for Rupprecht & Patashnick Co., Inc. PPartisol-Plus Model 2025 Sequential Air Sampler (R&P Sequential FRM). Available at: https://arb.ca.gov/airwebmanual/aqsbdocs1/404sop200301.pdf. Accesed: May 2019.

[34] CARB. Laboratory Standard Operating Procedures – Ambient Air. Available at: https://ww2.arb.ca.gov/laboratory-standard-operating-procedures-ambient-air. Accessed: May 2019.

[35] CARB. Standard Operating Procedures for Met-One Instruments Beta Attenuation Mass Monitor (BAM-1020). Available at: https://www.arb.ca.gov/airwebmanual/aqsbdocs1/400sop200306.pdf?_ga=2.134865457.1329027809.1557760596-483290622.1543507065. Accessed: May 2019.

particle mass concentrations using calculated constants from regression models developed during the establishment of the IVAN network.[36]

The field operating procedures for the AB 617 Community Monitors could be modeled after those established by CCV for the IVAN monitors.[37] A high-level description of these procedures is provided below:

- The AB 617 Community Monitors would be sited to guidelines established by CARB and the USEPA.[38]
- The AB 617 Community Monitors would be inspected and cleaned following manufacturer guidelines.[39] At a minimum, the monitors would be inspected every 45 days for routine maintenance.
- Reactive troubleshooting for any offline monitors would occur within 48 hours of technician availability or as soon as access is guaranteed to the monitor host site.
- The AB 617 Community Monitors would be field-calibrated every twelve months, which may include sensor replacement if needed to address performance issues.
- Field logs would be used to document all activities conducted at the monitoring sites. At a minimum, the information collected would include: date of activity, activity type, activity outcome, and images of location/event.

Since Dylos DC1700 units use light-scattering technology, there are no filters or other samples to be analyzed in the laboratory. Therefore, there are no SOPs for the laboratory setting at this time.

8.4 Monitoring Methods and Equipment for Complementary Monitoring

The monitoring methods and equipment for complementary monitoring will be discussed and decided upon by the Steering Committee in the second half of 2019.

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[36] Graeme N. Carvlin, Humberto Lugo, Luis Olmedo, Ester Bejarano, Alexa Wilkie, Dan Meltzer, Michelle Wong, Galatea King, Amanda Northcross, Michael Jerrett, Paul B. English, Donald Hammond & Edmund Seto (2017). Development and field validation of a community-engaged particulate matter air quality monitoring network in Imperial, California, USA, Journal of the Air & Waste Management Association, 67:12, 1342-1352, DOI: 10.1080/10962247.2017.1369471.

[37] Available at: [PLACEHOLDER – LINK FOR DRAFT CCV TECHNICAL MONITORING MANUAL]

[38] Available at: [PLACEHOLDER – LINK FOR RELEVANT CARB/USEPA GUIDELINES]

[39] Available at: [PLACEHOLDER – LINK FOR RELEVANT MANUFACTURER'S GUIDELINES]

9 Element 8 – Determine Monitoring Areas

9.1 Element 8 Overview

Monitoring areas were selected based on public input, review of existing air monitoring data, locations of source emissions, and locations of sensitive populations. The Corridor has some existing air quality monitors that help to track air quality in the community. The additional monitoring areas will provide a greater resolution of data that will cover more of the Corridor. The locations were chosen in order to obtain data that will allow community members to make informed choices related to the community exposure burden.

9.2 Location of Regulatory Monitors

The number of regulatory monitors in a given area is dictated by 40 CFR Part 58, Appendix D.[40] For PM_{10} and $PM_{2.5}$, the number of monitors is based on air quality conditions and population in a given metropolitan statistical area (MSA). Imperial County is part of the El Centro MSA, which has a 2010 census population of 174,528 and a PM_{10} design value concentration that is 299% of the NAAQS.[41] Therefore, the El Centro MSA is required to have one to two PM_{10} monitors. The $PM_{2.5}$ design value is 89% of the 24-hour NAAQS and 100% of the annual NAAQS. Therefore, the El Centro MSA is required to have at least one site that monitors 24-hour and annual $PM_{2.5}$. Currently, there are five regulatory monitors for PM_{10} and three regulatory monitors for $PM_{2.5}$ in Imperial County. As discussed previously, existing regulatory monitors within the Corridor include the El Centro monitoring station and the Calexico monitoring station, which monitor both $PM_{2.5}$ and PM_{10}.

The El Centro and Calexico monitoring stations were sited in accordance with 40 CFR Part 58, Appendix E,[42] which specifies horizontal and vertical placement, spacing from obstructions or emission sources, and other requirements. Both monitoring stations are sited to the "neighborhood scale", which is appropriate for measuring typical concentrations in areas of high population density and determining the highest concentrations expected to occur in the area covered by the network. No change to the location of the regulatory monitors is being proposed as part of this Plan.

9.3 Location of AB 617 Community Monitors

The El Centro-Heber-Calexico Corridor is unique in its air quality issues due to its proximity to the international border. For this reason, one of the first recommended monitoring areas by the Steering Committee is along the international border. Another area of interest is performing monitoring at schools within the Corridor that currently do not have nearby monitoring. There are still many schools in the Corridor that do not have a community or regulatory monitor nearby but

[40] 40 CFR Part 58, Appendix D. Available at: https://www.law.cornell.edu/cfr/text/40/appendix-D_to_part_58. Accessed: May 2019.
[41] CARB. Annual Network Plan. Available at: https://www.arb.ca.gov/aqd/amnr/amnr2018.pdf. Accessed: May 2019.
[42] 40 CFR Part 58, Appendix E. Available at: https://www.law.cornell.edu/cfr/text/40/appendix-E_to_part_58. Accessed: May 2019.

are near unpaved traffic areas, vacant lots, and/or agriculture. Examples include the Enrique Camarena Jr High School in Calexico and the Heber Dogwood Elementary School in Heber.

In addition, the Steering Committee has identified areas in the Corridor that have not been monitored to a satisfactory extent for potential air quality impacts or for informational benefit. One such area is the freight hub in northwest Calexico around Portico Blvd. This location is a concentrated activity area for shipping, cargo transportation, and idling trucks. While this area has also been preselected by CARB for mobile data monitoring, that study will only occur for a short period during the summer season.

The criteria considered in the selection of monitoring areas included input from the Community and final selection by the Steering Committee during the mapping activity conducted during the May 22, 2019 Steering Committee meeting. During that exercise, the Steering Committee was given guidelines and offered suggested monitoring sites that CCV identified using Steering Committee input and with consideration of the locations of active community monitoring sites. In addition, the following logistical concerns were taken into consideration in the selection of monitoring sites:

1. The site needs to be a secure location where the monitor can be installed, at the appropriate height per siting criteria guidelines.
2. The site needs to provide safe access, so that the monitor technician is not in danger when installing or maintaining the monitor (e.g., stairway or elevator access to rooftop is preferred).
3. The site needs to support the physical installation of the monitor. The monitor must be affixed to a building via:
    a. A metal pole that would then be directly affixed to the building (such as to the side of the building); or
    b. A tripod that would then be bolted to the ground (preferred) or held down by sandbags (less ideal, as heavy winds can still tip this over).
4. The site needs to provide a safe alternating current (AC) power supply (such that installation of the monitors and use of power would not pose any safety concerns).
5. The site needs to provide internet access; use of the building's internet via Ethernet cable or Wi-Fi would be ideal. If this is not possible, the AB 617 Community Monitor would be fitted with a separate cellular hotspot.

[PLACEHOLDER – description of the characteristics of the selected sites]

10 Element 9 – Develop Quality Control Procedures

10.1 Element 9 Overview

Quality control procedures are essential to ensure that data quality objectives are being met and the resulting data is scientifically defensible. Technical quality control activities are routinely performed to measure or estimate the effect of errors and determine whether corrective action must be taken. The CAPP Blueprint includes reference materials, calibration, ongoing quality control measures, blanks, spikes, duplicates/collocation, and audits as options for quality control procedures. However, specific quality control procedures depend on the method used for monitoring.

10.2 Quality Control Procedures for Regulatory Monitors

The El Centro and Calexico monitoring stations are operated in accordance with CARB's Quality Management Plan, Quality Assurance Project Plans (QAPPs), and SOPs. An overview of the quality control procedures for the particulate matter monitors at these stations is included in the following sub-sections.

10.2.1 Collocation

Collocated monitors are used to assess precision of the monitoring equipment by comparing duplicate measurements from the two monitors. Collocation requirements for regulatory monitors are included in 40 CFR Part 58, Appendix A.[43] Federal regulations require the following for $PM_{2.5}$:

- 15% of FEM and FRM primary $PM_{2.5}$ monitors in a network are required to have a collocated monitor for each method type.
- Collocated FRM monitors must use the same method of measurement.
- For each site with collocated $PM_{2.5}$ FEM monitors, half of the collocated monitors must have the same method of measurement and half must be FRM monitors.
- 80% of collocated $PM_{2.5}$ monitors must be in sites where the design values are within 20% of the NAAQS.

Since the CARB monitoring network covers the entire state of California, the collocated monitors are located at various locations across the state. The second FRM $PM_{2.5}$ monitor at the Calexico monitoring station is one of the required collocated FRM monitors.

Collocated sampling for PM_{10} is only required for manual samplers. The El Centro and Calexico PM_{10} monitors are not manual samplers and therefore do not have collocation requirements.

[43] 40 CFR Part 58, Appendix A. Available at: https://www.law.cornell.edu/cfr/text/40/appendix-A_to_part_58. Accessed: May 2019.

10.2.2 Calibration

Calibration is the comparison of a measurement against a measurement standard and is performed to reduce instrument bias. Calibration includes verification of monitoring parameters and equipment, including: flow rate, thermometer sensors, pressure sensors, and leak checks. The particulate matter monitors at the El Centro and Calexico monitoring stations are subject to the calibration and verification requirements, frequency, and acceptance criteria outlined in the CARB Audit Procedures Manual.[44]

10.2.3 Blanks

Blank samples are collected to determine contamination of $PM_{2.5}$ filter cassettes from the outside environment. The following types of blanks are specified by CARB's SOP for $PM_{2.5}$ sampling[45]:

- Lot Blanks – Lot blanks are used to determine the length of time it takes for the filter to stabilize. Three filters are randomly selected from each shipment of cassettes from the USEPA to CARB.
- Stability Blanks – Stability blanks are used to determine if there is contamination in the condition area. Four stability blanks are weighted prior to each weighing session day.
- Field Blanks – Field blanks are unexposed filters that determine whether contamination occurs during sampling. Field blanks are loaded onto the sampler, but do not undergo airflow. A field blank is collected for every 10 primary samples.
- Trip Blanks – Trip blanks are used to determine if there is contamination during transportation of the filters. Trip blanks are handled in the same way as primary samples but are not loaded onto the sampler. A trip blank is collected for every 10 primary samples.
- Lab Blanks – Lab blanks are used to determine if contamination is occurring in the laboratory. Lab blanks are included in each pre-weigh session and remain in the laboratory for 30 days before being included in the post-weigh session.

10.2.4 Flow Rate Verification

Flow rate verification requirements for regulatory monitors are included in 40 CFR Part 58, Appendix A.[46] One-point flow rate verification must be performed on a monthly basis for each

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[44] CARB. Air Quality Monitoring Quality Assurance Audit Procedures Manual. Available at: https://www.arb.ca.gov/aaqm/qa/qa-manual/vol5/v5apxy.pdf?_ga=2.194178925.1329027809.1557760596-483290622.1543507065. Accessed: May 2019.

[45] CARB. Standard Operating Procedure for Determination of PM2.5 Mass and PM Coarse mass by Gravimetric Analysis. Available at: https://www.arb.ca.gov/aaqm/sop/mld055.pdf. Accessed: May 2019.

[46] 40 CFR Part 58, Appendix A. Available at: https://www.law.cornell.edu/cfr/text/40/appendix-A_to_part_58. Accessed: May 2019.

$PM_{2.5}$ and PM_{10} monitor. The verification is performed by checking the operation flow rate of the monitor. The percent difference between the audit and measured flow rates are used to assess the bias of the monitoring data.

10.2.5 Audits

Audit requirements for regulatory monitors are listed in 40 CFR Part 58, Appendix A.[47] The PM_{10} and $PM_{2.5}$ monitors in El Centro and Calexico must undergo a minimum of two flow rate audits per year, ideally spaced between five and seven months apart. CARB's Quality Assurance Section (QAS) performs the audit by comparing the monitor flow rate to a certified orifice or a mass flow meter, certified against a National Institute of Standards and Technology (NIST) traceable flow device or calibrator. The flow rate is measured during normal operation of the monitor and compared to the true flow rate from the audit device's calibration curve. The difference between the monitor flow rate and the true flow is used to evaluate monitor performance.

During the flow rate audit, CARB also performs a siting evaluation. This is done to determine if the site continues to meet the siting requirements in 40 CFR Part 58, Appendix E.[48] Examples of physical changes that may affect a monitor's ability to meet siting requirements include vegetative growth or building construction near the monitor.

While not specifically required by the USEPA, CARB also performs audits on laboratory performance and procedures and technical systems. The laboratory audits are conducted by QAS on an annual basis to verify the accuracy of the laboratory balance, relative humidity sensors, and temperature sensors. The technical system audits are performed on a six-year schedule and involve analyzing staff records, procedures, instrumentation, facilities, and documentation kept by the local agency (i.e., ICAPCD) to ensure compliance with applicable requirements.

10.2.6 Exceedance of Control Limits

If an audit reveals that the monitor is not meeting the required criteria, an Air Quality Data Action (AQDA) request is issued to the facility operator. The operator must then resolve the issue and bring the monitor back into compliance. The operator documents the resolution, the amount of time during which measurements may have been affected, and recommends whether the data be released, corrected, or invalidated. The AQDA is reviewed by the CARB Quality Management Branch and the final version gets submitted to the CARB Air Quality Analysis Section. Systematic or operational issues that may affect data quality are documented through the issuance of a Corrective Action Notification. Once the identified issue has been resolved, a closure letter is sent by the CARB Quality Management Branch to the responsible organization.

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[47] Ibid.

[48] 40 CFR Part 58, Appendix E. Available at: https://www.law.cornell.edu/cfr/text/40/appendix-E_to_part_58. Accessed: May 2019.

10.3 Quality Control Procedures for AB 617 Community Monitors

The quality control procedures for the AB 617 Community Monitors would be similar in nature to the current procedures in place for the IVAN network and would leverage some of calibration analyses performed in the creation of the IVAN network. For instance, in the establishment of the IVAN network, the IVAN monitors underwent a five-month collocation period to develop a calibration equation, unique to the Imperial County region, that converts particle counts to particle mass concentrations.[49] CCV is currently looking to perform additional collocation studies to possibly develop calibration equations for more specific areas of Imperial County. It's possible these equations could be used with the AB 617 Community Monitors.

Separate from field colocations and calibrations, the AB 617 Community Monitors would undergo a laboratory calibration every time the monitors are sent to the manufacturer for service. This would occur at a minimum of once every two years or more frequently if the monitor is damaged in the field.

[PLACEHOLDER – DISCUSSION ON PRECISION/ACCURACY CHECKS AND DRIFT]

Auditing of the AB 617 Community Monitors would occur every sixty (60) days. During each audit the monitors would be examined for any developing issues, including evaluation of hardware and host site location. Noted hardware issues would be addressed as soon as possible to maintain data quality. Should the monitors develop issues outside of an audit, a technician would address those issues as soon as possible, as availability of technicians and site host access allowed.

[PLACEHOLDER – ADDITIONAL DISCUSSION REGARDING THE QA/QC PROCESS]

[49] Graeme N. Carvlin, Humberto Lugo, Luis Olmedo, Ester Bejarano, Alexa Wilkie, Dan Meltzer, Michelle Wong, Galatea King, Amanda Northcross, Michael Jerrett, Paul B. English, Donald Hammond & Edmund Seto (2017). Development and field validation of a community-engaged particulate matter air quality monitoring network in Imperial, California, USA, Journal of the Air & Waste Management Association, 67:12, 1342-1352, DOI: 10.1080/10962247.2017.1369471.

11 Element 10 – Describe Data Management

11.1 Element 10 Overview

Data management is essential to providing quality results. It begins with the collection of analytical results. In addition to capturing particulate matter concentrations, additional descriptors such as instrument identifiers, measurement units, date stamps, and other parameters identifying important attributes of the data are collected. The second phase of data management is data storage. Data storage includes not only the data descriptors described above, but also data quality indicators, data qualifiers, ingest dates, and chains of custody. The parameters and values collected in the data acquisition and storage phases provide tools for the operator and system to conduct detailed reviews of the data. Data review and flagging procedures will be utilized to ensure that data quality is maintained.

11.2 Data Management for Regulatory Monitors

11.2.1 Collection of Results

11.2.1.1 Met One Instruments Beta Attenuation Mass 1020 Monitor (PM_{10} and $PM_{2.5}$)

The data collected by the Met One BAM 1020 monitors follow the requirements listed in CARB's *Standard Operating Procedures for Met-One Instruments, Beta Attenuation Mass Monitor.*[50] As such, the following data is collected from each monitor: station identification data, instrument identification data, date and time, sample time, concentration, total flow, wind speed, wind direction, temperature, relative humidity, barometric pressure, and calibration data, including pressure and temperature sensor calibration, flow calibration, and flow verification. Additionally, a quality control maintenance check sheet is maintained to ensure that daily, weekly, biweekly, and monthly checks are documented.

11.2.1.2 Rupprecht & Patashnick Co., Inc Partisol-Plus Model 2025 Sequential Air Sampler ($PM_{2.5}$)

The data collected by the R & P 2025 monitors follow the requirements listed in CARB's *Standard Operating Procedures for Rupprecht & Patashnick Co., Inc. Partisol-Plus Model 2025 Sequential Air Sampler.*[51] As such, the following information is collected from each monitor: station identification data, instrument identification data, pressure and temperature monitor identification data, technician information, date and time, total elapsed time, total volume, ambient and filter temperature, pressure, sampling conditions, volumetric flow rates, leak tests, calibration data, filter pre-weight and post-weight, and chain-of-custody information. Additionally, a quality control

[50] CARB Standard Operating Procedures for Met-One Instruments Beta Attenuation Mass Monitor (BAM-1020), AQSB SOP 400, First Edition, June 2003, Available at: https://arb.ca.gov/airwebmanual/aqsbdocs1/400sop200306.pdf. Accessed: May 2019.

[51] CARB Standard Operating Procedures for Rupprecht & Patashnick Co., Inc. Partisol-Plus Model 2025 Sequential Air Sampler (R&P Sequential FRM). AQSB SOP 404, First Edition, January 2003. Available at: https://arb.ca.gov/airwebmanual/aqsbdocs1/404sop200301.pdf. Accessed: May 2019.

maintenance check sheet is maintained to ensure that weekly, monthly, and semi-annual checks are documented.

11.2.2 Data Storage

Data management and storage procedures are outlined in CARB's *Standard Operating Procedures for Data Management System.*[52] The data management process involves retrieving air quality data from pollutant monitors, transmitting the data from field stations to a central server, ingesting the data into a central database, and processing the data into different formats for reporting. The CARBLogger (CL) is a Linux-based data logger which continuously queries each monitor to record raw data. Raw data is time-stamped and flagged to allow the Data Management System (DMS) to determine whether collected data is valid. After data is formatted, it is transmitted to the CARB Secure File Transfer Protocol (SFTP) server. Data is then accessed by DMS. DMS is a Microsoft Server-based data management system which allows users to manage, summarize, and distribute aerometric data, as well as document chains-of-custody. DMS resides on a virtual server maintained at the California State Tier-1 data center. Parameters stored on DMS include the station ID, USEPA's Air Quality System (AQS) site number, instrument identifier, date and time of the measurement, the parameter measured, data units, calibration data, meteorological data, event logs, chains-of-custody, null codes, quality assurance codes, information flags, field operation codes, and quality control codes.

11.2.3 Data Review and Flagging Procedures

DMS processes data files differently, depending on the reporting requirements. For real-time reporting, DMS screens the hourly data through automated quality control checks. These quality control checks identify instrumentation with data that remains constant for a significant period of time, as well as large transitions in data from one hour to the next. DMS will automatically flag this data as suspect or invalid. Valid hourly data is then transmitted back to the front-end server for distribution to USEPA's AirNow System[53] and CARB's Air Quality and Meteorological Information System (AQMIS).

For monthly reporting to AQS,[54] the data is quality checked and reviewed by CARB staff prior to submission to the AQS database. CARB SOPs for Data Review and Validation defines the review process for air quality data.[55] Air quality data goes through several levels of review prior to being uploaded to AQS:

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[52] CARB Standard Operating Procedures for Data Management System, AQSB SOP 606, March 2017. Available at: https://www.arb.ca.gov/airwebmanual/aqsbdocs1/AQSB%20SOP%20606%20(Data%20Management%20System).pdf?_ga=2.140093939.130531515.1557518709-959186382.1528487942. Accessed: May 2019.

[53] USEPA. AirNow. Available at: https://airnow.gov/. Accessed: May 2019.

[54] USEPA. Air Quality System (AQS). Available at: https://www.epa.gov/aqs. Accessed: May 2019.

[55] CARB Standard Operating Procedures for Data Review and Validation, AQSB SOP 610, Second Edition, March 2016. Available at: https://www.arb.ca.gov/airwebmanual/aqsbdocs1/AQSB%20SOP%20610%20%28Data%20Review%29.pdf?_ga=2.117519681.937051405.1557726604-532886017.1555607187. Accessed: May 2019.

1. The first level review is performed by station operators. Values are reviewed to confirm normal operation of monitors. Data is reviewed for outliers, maximum and minimum values, consistently repeating data values, and automatically flagged values. The first level reviewer documents analyzer performance, malfunctioning instruments, and interferences on monthly maintenance datasheets, or station logbooks. Station operators also review data that has been automatically flagged by DMS as suspect or invalid to determine if the data is valid.

2. The second level data review is site specific and focuses on diurnal and seasonal trends that surround high and low values, and exceedances. The second level reviewer determines if the maximum values are greater than or equal to the state or federal ambient air quality standards to determine if the values are reasonable based on the time of year, whether the daily maximum and minimum values were impacted by a source or unusual condition, if daily data is complete, data trends, etc. The second reviewer flags data as invalid as necessary, based on guidelines set in the CARB SOPs for Data Review and Validation. An assessment of the data is performed to ensure that QC checks, equipment failures, and power outages are properly flagged, and that the required codes correctly detail the situation. Instrument and meteorological parameters are also reviewed.

3. Section Manager reviews are performed to ensure data completeness, proper maintenance of the stations, and operation of the monitors is within acceptable criteria. Section managers compare collocated data to ensure that it compares well, as well as ensure that all QC procedures were performed by staff.

4. Branch Chiefs are responsible for approval of the data for submittal to AQS.

Data exported to the AQS database includes valid data, null codes indicating invalid data, and data flags on valid data. Certain data will be excluded from data aggregation, including: samples with pressure, time, flow rate, or temperature out of limits, samples with damaged or leaky filters, samples with collection or lab errors, samples with poor quality assurance results and calibrations, and samples whose hold times or transport temperatures are out of specs. Additional data flags can include:

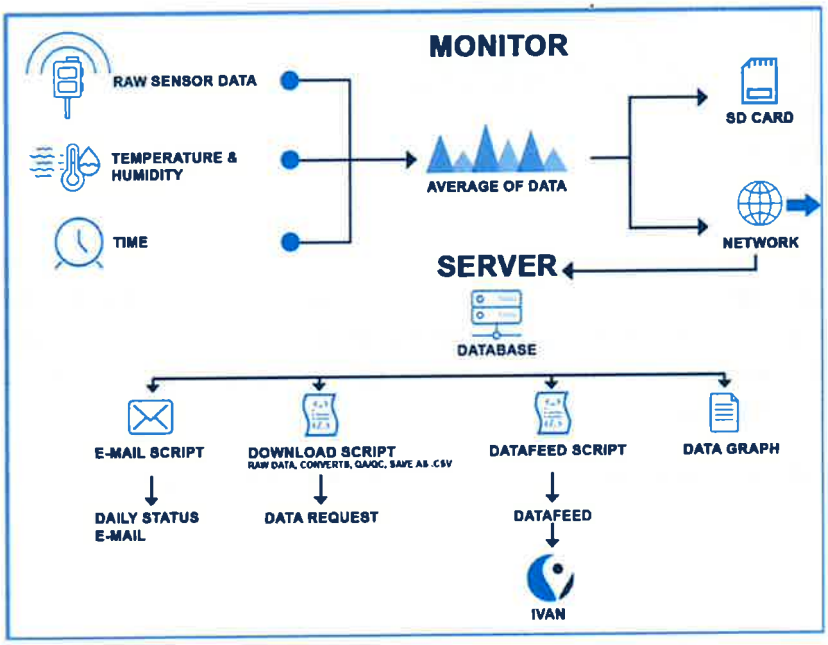
- Qualifier codes for high winds, industrial accidents, fires, lab errors, operational deviations, etc.
- QC codes for insufficient data, precision checks, operator data, calibrations, etc.
- Operation codes for insufficient data, pressure, temperature, or flow errors, and power failures

The Corrective Action Notification (CAN) process documents issues impacting data quality, completeness, storage, and reporting.[56] It is used to investigate and correct air monitoring issues to prevent recurrence. Examples of issues that prompt the CAN process include: missing or anomalous data, incorrect frequency or failure of calibrations or routine checks, expired standards, incomplete records, etc. Once issues are identified, corrective actions must be implemented. The CAN database is reviewed annually to identify common or systemic issues.

11.3 Data Management for AB 617 Community Monitors

Data collection by the AB 617 Community Monitors will follow similar guidelines to those established for the IVAN network[57] and will ensure that all data fields required by CARB's AQ View data portal will be fulfilled. Ultimately, the dataflow for the AB 617 Community Monitors would follow the flow presented in Figure 11.1 below.

Figure 11.1. AB 617 Community Monitor Data Flow



Data storage at the AB 617 Community Monitors would occur at two different locations. Data would be physically stored at the monitor on an SD card and also stored on a cloud server database. Data would not altered during the QA/QC processes as every step of QA/QC would create a new copy of the database files. This results in at least four sets of the data: two raw data

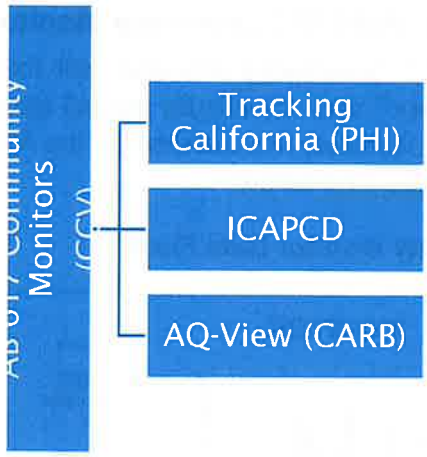
[56] CARB Air Monitoring Quality Assurance Volume 5, Standard Operating Procedures for Corrective Action Notification, October 2014. Available at: https://www.arb.ca.gov/aaqm/qa/pqao/can/can_sop.pdf?_ga=2.19472112.937051405.1557726604-532886017.1555607187. Accessed: May 2019.

[57] Available at: [PLACEHOLDER – LINK FOR IVAN DATA MANAGEMENT GUIDELINES]

files (SD card and server database), one dataset flagged by QA/QC processes, and one post-QA/QC dataset available for data requests.

To meet the AQ View requirements, the data feed would also be directed to CARB through the best available method, as determined by AQ View staff.

Data chain of custody would be as follows:



First, CCV would be responsible for the operation and maintenance of the AB 617 Community Monitors and would ensure the successful collection of data. Next, the data would be shared with Tracking California, who would assist in performing QA/QC tasks. Both raw and QA/QCed data would be shared with ICAPCD to maintain on their own servers. QA/QCed data would also be shared with CARB to fulfill the AQ View requirement.

The AB 617 Community Monitors would be registered with the AQ View portal using the following required fields:

- Monitor ID
- Monitor Purpose
- Monitor manufacturer
- Monitor model
- Firmware
- Purchase date
- Last service date
- Start date
- Parameters:
  - Measurement technique
  - Measurement units
  - Sampling duration
  - Sampling frequency

- Last calibration timestamp

As data is collected by the AB 617 Community Monitors, the following parameters would be supplied to CARB on a regular basis for upload to the AQ View portal:

- Site ID – to be chosen by provider
- Monitor ID – to be chosen by provider
- Date – timestamp for our data
- Start Time – timestamp for our data
- Measurement Value – measured value at time of upload
- Measurement Units – 3-digit AQS unit code as distributed by AQ View

12 Element 11 – Provide Work Plan for Conducting Field Measurements

12.1 Element 11 Overview

An effective work plan describes field procedures that will be followed by those conducting measurements. Field procedures describe individual tasks with enough detail that trained air district staff and community members can complete the tasks. The timeline established in the work plan determines the duration of the field measurements and denotes milestones for completing tasks. The work plan also describes communication and coordination steps that ensure field personnel know whom to contact for questions, and how work products are delivered, and includes safety procedures.

12.2 Field Procedures for Regulatory Monitors

12.2.1.1 Met One Instruments Beta Attenuation Mass 1020 Monitor (PM_{10} and $PM_{2.5}$)

Field procedures for the Met One BAM 1020 monitors are listed in CARB's *Standard Operating Procedures for Met-One Instruments, Beta Attenuation Mass Monitor.*[58] Examples include: installation and configuration of the system, performance of an instrument self-test, calibration procedures, verification procedures for flow rate, temperature sensor, barometric sensor, and clock/timer, leak check procedures, and maintenance procedures. The document also lists the materials required for each field procedure.

12.2.1.2 Rupprecht & Patashnick Co., Inc Partisol-Plus Model 2025 Sequential Air Sampler ($PM_{2.5}$)

Field procedures for the R & P 2025 monitors are listed in CARB's *Standard Operating Procedures for Rupprecht & Patashnick Co., Inc. Partisol-Plus Model 2025 Sequential Air Sampler.*[59] Examples include: installation and configuration of the system, data retrieval and submittal (including chain-of-custody requirements), sample filter handling procedures, calibration procedures, verification procedures for the ambient temperature sensor, the filter temperature sensor, the filter compartment temperature sensor, barometric pressure, leak checks, external leak checks, and flow rate. The document also lists the materials required for each field procedure.

[58] CARB Standard Operating Procedures for Met-One Instruments Beta Attenuation Mass Monitor (BAM-1020), AQSB SOP 400, First Edition, June 2003, Available at: https://arb.ca.gov/airwebmanual/aqsbdocs1/400sop200306.pdf. Accessed: May 2019.

[59] CARB Standard Operating Procedures for Rupprecht & Patashnick Co., Inc. Partisol-Plus Model 2025 Sequential Air Sampler (R&P Sequential FRM). AQSB SOP 404, First Edition, January 2003. Available at: https://arb.ca.gov/airwebmanual/aqsbdocs1/404sop200301.pdf. Accessed: May 2019.

12.2.2 Routine Service Checks

12.2.2.1 Met One Instruments Beta Attenuation Mass 1020 Monitor (PM_{10} and $PM_{2.5}$)

Routine service checks for the Met One BAM 1020 are outlined in CARB's *Standard Operating Procedures for Met-One Instruments, Beta Attenuation Mass Monitor.*[60] Routine service checks include:

1. Daily checks involving a review of station datalogger values for proper operation of the monitor;
2. Weekly checks of the BAM filter tape;
3. Biweekly flow and leak checks;
4. Monthly maintenance checks; and
5. Semi-annual verification and calibration of external ambient temperature, internal pressure, leak checks, and volumetric flow.

12.2.2.2 Rupprecht & Patashnick Co., Inc Partisol-Plus Model 2025 Sequential Air Sampler ($PM_{2.5}$)

Routine service checks for the R & P 2025 monitors are listed in *CARB's Standard Operating Procedures for Rupprecht & Patashnick Co., Inc. Partisol-Plus Model 2025 Sequential Air Sampler.*[61] Routine service checks include:

1. Daily checks involving a review of summary data for compliance with measurement quality objectives listed in the SOP;
2. Weekly inspections of the water trap;
3. Biweekly flow verification checks;
4. Monthly maintenance and cleaning, temperature sensor verifications for the filter and ambient sensors, and clock and date verification; and
5. Semi-annual verification and calibration of external ambient temperature, internal pressure, leak checks, and volumetric flow.

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[60] CARB Standard Operating Procedures for Met-One Instruments Beta Attenuation Mass Monitor (BAM-1020), AQSB SOP 400, First Edition, June 2003, Available at: https://arb.ca.gov/airwebmanual/aqsbdocs1/400sop200306.pdf. Accessed: May 2019.

[61] CARB Standard Operating Procedures for Rupprecht & Patashnick Co., Inc. Partisol-Plus Model 2025 Sequential Air Sampler (R&P Sequential FRM). AQSB SOP 404, First Edition, January 2003. Available at: https://arb.ca.gov/airwebmanual/aqsbdocs1/404sop200301.pdf. Accessed: May 2019.

12.2.2.3 Support Equipment

Additional routine service procedures for support equipment are found in:

- *CARB Air Monitoring Quality Assurance, Volume II, Standard Operating Procedures for Air Quality Monitoring, Appendix T, Meteorological Parameter Procedures for Wind Speed Sensors.*[62]
- *CARB Air Monitoring Quality Assurance, Volume II, Standard Operating Procedures for Air Quality Monitoring, Appendix V, Meteorological Parameter Procedures for Wind Direction Sensors.*[63]
- *CARB Air Monitoring Quality Assurance, Volume II, Standard Operating Procedures for Air Quality Monitoring, Appendix AA, Meteorological Parameter Procedures for Inside/Outside Temperature Sensors.*[64]

12.3 Field Procedures for AB 617 Community Monitors

Field procedures for the AB 617 Community Monitors will be logged using a mobile data collection tool. Use of a mobile tool will allow for in-the-field notes to be uploaded to a cloud server where team members can view records as needed to answer inquiries or provide supporting information.

Upon installation of the AB 617 Community Monitors, a record of the monitor host site will be established. Information collected will include: site point of contact, site availability, materials used, site peculiarities, wireless connection information, and any other details as needed.

The AB 617 Community Monitors will be equipped with a physical label that will include the contact information for technician staff to report any monitor or host site issues. Additionally, the monitors will feature a label intended for the public that will direct them to the location where they can observe the data collected by the monitor.

Upon the installation of the AB 617 Community Monitors, CCV will coordinate with the AQ View team at CARB and ICAPCD to ensure the seamless transmission of data. The auditing procedures described under Element 9 will be followed to ensure all QA/QC requirements are met.

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[62] CARB Air Monitoring Quality Assurance, Volume II, Standard Operating Procedures for Air Quality Monitoring, Appendix T, Meteorological Parameter Procedures for Wind Speed Sensors. Available at: https://www.arb.ca.gov/airwebmanual/aqsbdocs1/v2apxt.pdf?_ga=2.108058186.937051405.1557726604-532886017.1555607187. Accessed: May 14, 2019.

[63] CARB Air Monitoring Quality Assurance, Volume II, Standard Operating Procedures for Air Quality Monitoring, Appendix V, Meteorological Parameter Procedures for Wind Direction Sensors. Available at: https://www.arb.ca.gov/airwebmanual/aqsbdocs1/v2apxv.pdf?_ga=2.108058186.937051405.1557726604-532886017.1555607187. Accessed: May 14, 2019.

[64] CARB Air Monitoring Quality Assurance, Volume II, Standard Operating Procedures for Air Quality Monitoring, Appendix AA, Meteorological Parameter Procedures for Inside/Outside Temperature Sensors. Available at: https://www.arb.ca.gov/airwebmanual/aqsbdocs1/v2apxaa.pdf?_ga=2.108058186.937051405.1557726604-532886017.1555607187. Accessed: May 14, 2019.

As described under Element 4, after data is collected from the AB 617 Community Monitors for six months year, the placement of the monitors and the need for further expansion of the network will be evaluated. Site locations are subject to change depending on the Steering Committee's concerns and recommendations.

12.4 Safety Procedures

Conducting any type of field work carries inherent risks associated with the specific tasks performed. This includes field work conducted for the purpose of air monitoring in the El Centro-Heber-Calexico Corridor, which may present safety hazards such the potential for falls or electrical injury. Special precautions should be taken when performing duties related to the operation of the community and regulatory monitors, which may include installation, auditing, calibration, regular maintenance, and other activities. The following precautions should be taken to avoid hazards:

Slips, Trips, and Falls

All work performed on the community monitors should comply with California Code of Regulations, Title 8, Section 3273, Working Area.[65] Permanent floors and platforms should be maintained free of dangerous projections or obstructions (e.g., extension cords, power cables, boxes, debris), and reasonably free of oil, grease, and water. Elevated working areas that are 30 inches or more above the floor should be no less than 2 feet wide, and should have no less than 6.5 feet of clear headroom. Extra caution should be taken following wet weather.

Heat Illness Prevention

All work performed on the community monitors should comply with California Code of Regulations, Title 8, Section 3395, Heat Illness Prevention.[66] Prior to undertaking outdoor work, field technicians should monitor the weather to understand the risk level for heat illness. Field technicians should take an adequate amount of drinking water and use shaded areas as necessary to cool down. When the temperature reaches 95 degrees Fahrenheit or above, field technicians should take a minimum ten-minute preventative cool down rest period every two hours.

[65] California Code of Regulations §3273, Working Area. Available at: https://www.dir.ca.gov/title8/3273.html. Accessed: June 2019.

[66] California Code of Regulations §3395, Heat Illness Prevention. Available at: https://www.dir.ca.gov/title8/3395.html. Accessed: June 2019.

Working at Heights

All field technicians using ladders should follow safe work practices and comply with California Code of Regulations, Title 8, Sections 3276 - 3278.[67,68,69] Prior to each use, ladders should be inspected to ensure they are free of cracks, splits, corrosion, and protrusions. Steps and rungs should be inspected to ensure they are free of oil or grease and firmly attached to the side rails. Ladders should be set up on flat surfaces, and always opened fully to ensure the spreader bars are locked. Ladders should not be used in high wind situations.

Working with Electrified Equipment

All field technicians should comply with California Code of Regulations, Title 8, Sections 2300 – 2989.1, Electrical Safety Orders.[70] Whenever electrical power is used, there is a danger of injury through electrical shock. All electrical equipment should be adequately insulated, grounded, or isolated to prevent bodily contact with any source of dangerous potentials. Damaged or malfunctioning items should be taken out of service until repaired by a qualified electrician. All equipment and handheld tools should have three-prong plugs and/or double insulation. Extension cords should not be used as permanent wiring, and should be rated for the equipment power needs.

Met One Instruments Beta Attenuation Mass 1020 Monitor (PM_{10} and $PM_{2.5}$)

Additional safety procedures specific to the Met One BAM 1020 monitors are outlined in CARB's *Standard Operating Procedures for Met-One Instruments, Beta Attenuation Mass Monitor.*[71] Precautions should be taken when working around electricity and power tools and at aboveground elevations. Additionally, the C-14 radioactive source should never be dismantled, removed, or tampered with. Field personnel should wear long sleeves and laboratory gloves to reduce exposure to C-14 beta rays.

[67] California Code of Regulations §3276, Portable Ladders. Available at: https://www.dir.ca.gov/title8/3276.html. Accessed: June 2019.
[68] California Code of Regulations §3277, Fixed Ladders. Available at: https://www.dir.ca.gov/title8/3277.html. Accessed: June 2019.
[69] California Code of Regulations §3278, Use of Fixed Ladders. Available at https://www.dir.ca.gov/title8/3278.html. Accessed: June 2019.
[70] California Code of Regulations §2299 - 2989, Electrical Safety Orders. Available at: https://www.dir.ca.gov/title8/sub5.html. Accessed: June 2019.
[71] CARB Standard Operating Procedures for Met-One Instruments Beta Attenuation Mass Monitor (BAM-1020), AQSB SOP 400, First Edition, June 2003, Available at: https://arb.ca.gov/airwebmanual/aqsbdocs1/400sop200306.pdf. Accessed: May 2019.

13 Element 12 – Specify Process for Evaluating Effectiveness

13.1 Element 12 Overview

A process for evaluating effectiveness serves as a check to ensure that air monitoring objectives are being met in a timely fashion. Additionally, it is necessary to understand how the monitoring plan will be revised or corrected if air monitoring objectives or the timeline are not being met.

13.2 Evaluating Effectiveness – Regulatory Monitors

As discussed in Chapter 5, one of the main air quality monitoring objectives of this Plan is to utilize the data collected by the regulatory monitors to track the progress of the Emissions Reduction Program. To ensure this objective is met, the Steering Committee has established benchmarks to evaluate effectiveness of this Plan as it relates to the regulatory monitors. These benchmarks and associated process of review will ultimately ensure that data from the regulatory monitors are available for the air quality data analyses that are outlined in Chapter 14.

The main indicator for effectiveness of the regulatory monitors is that the data is successfully collected and made available for analysis. Confirming that this benchmark has been reached will be an ongoing process that will entail regularly downloading monitoring data from USEPA's AQS, an online tool that provides access to ambient air quality data collected by federal, state, local, and tribal agencies from monitors all around the United States.[72] Through this tool, users can download annual summaries as well as daily average data from thousands of different regulatory monitors, including the two located within the Corridor. When data is initially collected by the monitors, it is not immediately uploaded into the AQS, but rather is made available through the "AirNow" program on USEPA's Outdoor Air Quality Data webpage.[73] Daily data here is updated frequently with the most recent monitoring results and is usually accessible within a few days of recording. It is used to calculate the local air quality index (AQI), a metric intended to provide simple, near real-time air quality data to the public. However, this data is not used to formulate or support regulation or any decision by USEPA until it has been verified and validated through quality assurance procedures. After that, the data is officially certified and added to the pre-generated data files accessible online via AQS.

For analyses to be conducted as part of the Monitoring Plan, the certified AQS data will be used. As discussed in Chapter 14, the analyses to be performed on this data will require annual average data for PM_{10} ambient concentrations at the El Centro and Calexico monitoring stations, as well as daily and annual average data for $PM_{2.5}$. To serve the efforts of the Monitoring Plan, daily PM_{10} and $PM_{2.5}$ data will be queried on a semi-annual basis. Newly available AQS data (i.e., data added since the previous query) will be added to a running log of AQS data for PM_{10} and $PM_{2.5}$ to be used for analysis. These regular checks will be used to confirm that data from the regulatory monitors is available for analysis, as appropriate. Chapter 14 of the Plan provides details on how and when this data will be analyzed to serve the goals of the Monitoring Plan.

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[72] USEPA. Air Quality System (AQS). Available at: https://www.epa.gov/aqs. Accessed: May 2019.
[73] USEPA. Outdoor Air Quality Data: Download Daily Data. Available at: https://www.epa.gov/outdoor-air-quality-data/download-daily-data. Accessed: May 2019.

Any issues that may be encountered during data query (e.g., monitoring data needed for analysis is not certified in a timely manner) will be documented and addressed in an Annual Progress Report. In the event that certified data is not available from the AQS when desired, preliminary analyses may be conducted using AirNow data and later updated with the certified data. The utilization of regulatory monitor data will continue for five years, after which an assessment will be conducted to determine if this practice should continue for the purposes of the Monitoring Plan.

13.3 Evaluating Effectiveness – Community Monitors

As discussed in Chapter 5, the progress of the Plan will be assessed against some previously selected benchmarks. A subset of these benchmarks applies specifically to the AB 617 Community Monitors, each of which constitutes a way in which the monitors' effectiveness will be evaluated. These benchmarks are:

- Within six months of the completion of the Monitoring Plan, 50 percent of AB 617 Community Monitors will be installed and transmitting data.
- Within twelve months of the completion of the Monitoring Plan, 100 percent of AB 617 Community Monitors will be installed and transmitting data; and
- After collecting data from the AB 617 Community Monitors for six months, the placement of monitors and the need for further expansion of the network will be evaluated. Monitor placement will be re-evaluated every six months thereafter.

Successfully meeting these benchmarks is one way to ensure that the community monitors are sufficiently operational in number, timing, and location. Regarding the third point, placement of the monitors will be evaluated after six months to gauge whether the locations selected are appropriate and generating a dataset at the desired level of detail. If any placements are determined to be ineffective, rearrangement or installation of additional monitors will be considered by the Steering Committee. Evaluation and potential decisions to modify locations of community monitors will be supported by the data analysis described in Chapter 14.

Effectiveness of the monitors will also be evaluated by confirming that the data they produce is successfully collected and made available for analysis, similar to how the effectiveness of the regulatory monitors is to be evaluated. Specifically, the data availability of the community monitors will be considered effective as long as they maintain an up-time rate of 80 percent and a data completeness rate of 75 percent. Finally, operation of the AB 617 Community Monitors and analysis of the data produced will be maintained indefinitely so long as there remains interest and support among members of the Community.

14 Element 13 – Analyze and Interpret Data

14.1 Element 13 Overview

Data analysis and interpretation is crucial to ensure the objectives of the Community Monitoring Plan are being met. This section describes how data analysis will be conducted, including data preparation procedures, and how air monitoring results will be translated into actions. Thorough documentation of data preparation procedures and types of analyses that are conducted is pivotal to ensuring that conclusions drawn are accurate and defensible.

14.2 Data Analysis and Considerations for Regulatory Monitors

The processes for data collection, preparation, management, and access for the regulatory monitors are outlined in Chapters 11, 12, and 13 of this Plan. Once the data has been collected and collated and the proper quality assurance measures have been taken, analysis can begin. One main goal for this data analysis is to evaluate air quality trends at the regulatory monitors to track the progress of the Emissions Reduction Program. This will be done to identify potential correlations between action taken as part of the Emissions Reduction Program and impacts to air pollutant levels. Regulatory monitor data will also be considered alongside Community monitor data when evaluating source impacts through identifying potential hotspots and pollutant concentration gradients. For these analyses, the following metrics will be considered:

- PM_{10} annual average concentration;
- $PM_{2.5}$ annual average concentration;
- $PM_{2.5}$ 98th percentile of 24-hour concentration; and
- $PM_{2.5}$ quarterly average of 24-hour concentrations.

For these analyses, time series tables and plots will be created for each of the aforementioned metrics at each of the regulatory monitors located within the Community. Data will be added to the tables and plots on a semi-annual basis, as described in Chapter 13, aside from the annual average metrics which will be updated once per year after the full year's data becomes available on AQS. Manual review of the plots will be utilized to reveal trends in ambient concentrations of PM_{10} and $PM_{2.5}$ as time goes by. These trends will be compared with those generated from the analysis of the Community monitoring data described in Section 14.3.

There are some considerations to note for each of the air quality metrics to be used for analysis as part of this Plan. For the PM_{10} annual average, days with elevated concentrations influenced by "exceptional events" will be excluded from the data set following a flagging by the ICAPCD. This practice aligns with what was done during data analysis for the Imperial County 2018 PM_{10} SIP.[74] An exceptional event is defined as resulting in "emissions that affect air quality in such a

[74] ICAPCD. 2018. *Imperial County 2018 Redesignation Request and Maintenance Plan for Particulate Matter Less Than 10 Microns in Diameter.* Available at: https://www.arb.ca.gov/planning/sip/planarea/imperial/sip.pdf. Accessed: May 2019.

way that there exists a clear causal relationship between the specific event and the monitored exceedance or violation" and is not reasonably controllable or preventable.[75] Since these events and their impacts to ambient particulate concentrations are unavoidable, PM_{10} measurements from days on which they occur will be excluded from the average annual PM_{10} concentration in the analysis for tracking the progress of the Emissions Reduction Program.

Regarding the $PM_{2.5}$ annual average metric, some consideration will need to be given to the potential for impacts from international emissions. As explained in the 2018 Imperial County $PM_{2.5}$ SIP, atmospheric transport of $PM_{2.5}$ and its precursor pollutants from Mexico can cause increased ambient concentrations in Imperial County and in effect, higher $PM_{2.5}$ measurements at Imperial County monitors.[76] This will be important to understand when comparing air quality data collected from monitors closer to the border with those farther away. Annual $PM_{2.5}$ design values[77] have historically been higher at the Calexico regulatory monitor compared to the El Centro monitor, and this is to be expected given the proximity of the Calexico monitor to the southern border and large metropolitan area of Mexicali, Mexico. Thus, the potential for impacts from international transport will need to be considered when analyzing the annual average $PM_{2.5}$ data for evaluation of the progress of the Emissions Reduction Program.

Similarly, analysis of the $PM_{2.5}$ quarterly average of the 24-hour data should be performed alongside consideration of certain factors, such as emissions from international sources and some specific types of burning. Calculated on a quarterly basis, this metric will exhibits seasonal trends. For example, certain activities typically increase in the winter months, such as residential wood burning and the burning of large outdoor bonfires, a traditional part of holiday celebrations in Mexico.[78] These can contribute increased emissions of $PM_{2.5}$ and its precursors to the atmosphere. During the summer, certain other sources have more activity, such as agricultural burning. In Imperial County, emissions of $PM_{2.5}$ from agricultural burning of field crops are typically higher on average summer days compared to the annual daily average.[79] When analyzing the quarterly average monitoring data, consideration of how emissions from certain sources can vary seasonally will be important for understanding $PM_{2.5}$ trends both temporally and spatially.

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[75] USEPA. 2019. *Guidance on the Preparation of Demonstrations in Support of Requests to Exclude Ambient Air Quality Data Influenced by High Wind Dust Events Under the 2016 Exceptional Events Rule. Available at:* https://www.epa.gov/sites/production/files/2019-04/documents/high_wind_dust_event_guidance.pdf. Accessed: May 2019.

[76] ICAPCD. 2018. Imperial County 2018 Annual Particulate Matter Less Than 2.5 Microns in Diameter State Implementation Plan. Available at: https://www.arb.ca.gov/planning/sip/planarea/imperial/final_2018_ic_pm25_sip.pdf. Accessed: May 2019.

[77] The design value for the annual $PM_{2.5}$ NAAQS is computed as the annual mean of $PM_{2.5}$ concentrations measured at the monitor, averaged over 3 years.

[78] ICAPCD. 2018. Imperial County 2018 Annual Particulate Matter Less Than 2.5 Microns in Diameter State Implementation Plan. Available at: http://www.co.imperial.ca.us/AirPollution/PublicNotices/PDFs/PublicHearings/20180424PM25AnnualSIP/DraftVersion/2018ICPM25SIPDRAFTv3.pdf. Accessed: May 2019.

[79] Ibid.

Another factor having impact on seasonal conditions and thus the quarterly average of the 24-hour $PM_{2.5}$ measurements is the local meteorology. Atmospheric conditions vary day to day but seasonal trends dependent on the region's climate are somewhat predictable. For example, the winter months in Imperial typically exhibit calmer winds compared to the summer. From October to February, lower wind speeds occur more frequently, with January being the month with the greatest number of calm wind measurements (i.e., less than 1 meter per second). These calmer winds in the winter create stagnant conditions which allow pollutants to accumulate, leading to more instances of higher $PM_{2.5}$ measurements at the regulatory monitors.[80] During the trend analysis of the quarterly average 24-hour $PM_{2.5}$ metric, if spikes are seen in the colder quarters, this phenomenon may offer an explanation as to why.

Finally, analysis of the trends in 98th percentile of the 24-hour $PM_{2.5}$ data should be performed alongside consideration of certain factors which can have impacts on daily measurements. Since this metric only looks at the highest individual days, events having acute impacts such as large agricultural burns (on either side of the border) should be investigated if days in the 98th percentile of $PM_{2.5}$ levels are unusually high.

14.3 Data Analysis and Considerations for Community Monitors

Prior to being uploaded to public-facing data displays, the data collected by the AB 617 Community Monitors will be converted using an algorithm designed to convert particle counts to particle mass concentrations. This algorithm also allows for the data to be used to calculate a community air quality level (CAL). The CAL utilizes a scale similar to that of the USEPA's AQI and features color coding to communicate the current air quality conditions to the public.

To ensure data quality, the data collected by the AB 617 Community Monitors will undergo the QA/QC processes described under Element 9. These processes are open to further development as more resources become available to the AB 617 Community Monitoring team. The current processes use an application to automatically flag data that is out of normal trends. The data team then manually reviews the flagged events and considers notes from technician's field logs when doing so.

[PLACEHOLDER – ADDITIONAL DISCUSSION ON HOW DATA WILL BE ANALYZED AND INTERPRETED]

[80] Ibid.

15 Element 14 – Communicate Results to Support Action

15.1 Element 14 Overview

Air monitoring results must be clearly and effectively communicated in order to ensure that they result in effective action. Results of air monitoring will be discussed with Community members, decision makers, and organizations that are able to take action in ICAPCD. Ongoing monitoring activities, interim progress updates, and final results will be communicated to the above entities. Information will be made available on the District and CARB webpages.

15.2 Communicating Results of Regulatory Monitoring

Results of the regulatory monitoring and data analysis will be made available to members of the Community in various ways. Firstly, the AQI for each of the five regulatory monitors in Imperial County (including the two within the Community) is posted on the homepage of the Imperial Valley Air Quality website.[81] The AQI is the most straightforward method of communication of air quality data to the public. It provides a concise summary of local conditions for a given pollutant in the form of a single indicator, which is calculated based on the most recent concentration measurement collected for that pollutant. At any given moment, there is an AQI for ozone, $PM_{2.5}$, and PM_{10}, the highest of which is presented as the AQI on the website and disseminated through other sources. In addition to the Imperial Valley Air Quality website, the AQI is communicated to the public via various other means including email (users can opt in to email updates on the same website), the Imperial Valley Air Quality mobile application, and ICAPCD's social media accounts on Facebook,[82] Twitter,[83] and Instagram.[84]

As described in Chapter 13, the AQI is calculated and communicated to the public as part of the USEPA's AirNow program, using monitoring data that has not yet undergone the quality assurance processes of data validation and verification. Once those are finished, the data is certified and uploaded into the USEPA's AQS. Members of the Community and the public in general can access the raw monitoring data both before and after it is certified by visiting the USEPA website for outdoor air quality data and querying the desired daily data based on geographic area and monitor site.[85]

Regarding activity related directly to the Monitoring Plan and Emissions Reduction Program, stakeholders and other members of the Community can refer to the special website created for AB 617 and managed by the District.[86] This website is regularly updated by the District with new information related to AB 617 efforts, such as agendas and minutes from Steering Committee

[81] CARB and ICAPCD. Imperial Valley Air Quality. Available at: http://imperialvalleyair.org/index.cfm. Accessed: May 2019.
[82] Available at: https://www.latest.facebook.com/Countyair/. Accessed: May 2019.
[83] Available at: https://www.instagram.com/county_air/. Accessed: May 2019.
[84] Available at: https://twitter.com/county_air. Accessed: May 2019.
[85] USEPA. Outdoor Air Quality Data: Download Daily Data. Available at: https://www.epa.gov/outdoor-air-quality-data/download-daily-data. Accessed: May 2019.
[86] ICAPCD. AB 617 Imperial County – Calexico, Heber, El Centro Corridor. Available at: https://www.icab617community.org/. Accessed: May 2019.

meetings. Visitors to the website also have the option to subscribe to the AB 617 mailing list to receive email updates when news becomes available. In terms of the more specific outcomes of the Monitoring Plan and findings from the monitoring results, Community members and stakeholders will be able to refer to an Annual Progress Report. This report will be made available on the Imperial AB 617 website following its completion at the end of each calendar year. It will include summaries of the year's regulatory monitoring efforts, as well as many other topics.

15.3 Communicating Results of Community Monitoring

Results of the community monitoring and data analysis will be made available to members of the Community in various ways. First, CARB is currently developing the AQ View portal to store AB 617 monitoring data and make it available to the public. Upon the installation of the AB 617 Community Monitors, CCV will coordinate with the AQ View team at CARB and ICAPCD to ensure the seamless transmission of community monitoring data. After AQ View has been fully developed, the Steering Committee will evaluate the information available on the site to ensure it meets their needs. The results of the community monitoring and data analysis will also be made available to the public through an Annual Progress Report, as described in Section 15.2. It may also be made available through the IVAN-Imperial website.[87] However, the details of that are yet to be determined.

[87] IVAN Air Monitoring Imperial Valley Air Quality. Available at: https://ivan-imperial.org/air. Accessed June 2019.

16 References

Imperial County Air Pollution Control District (ICAPCD). 2019. *AB 617 Community Steering Committee Charter*. March 19. Available from https://docs.wixstatic.com/ugd/99eb03_645f259f6bb44a4f81bedd12dfc98ce6.pdf. Accessed: June 2019.

California Air Resources Board (CARB). 2018. *Standard Operating Procedure for Determination of $PM_{2.5}$ Mass and PM Coarse mass by Gravimetric Analysis*. August 2. Available from: https://www.arb.ca.gov/aaqm/sop/mld055.pdf. Accessed: May 2019.

CARB. 2018. Resolution 18-37: Assembly Bill 617 Community Air Protection Program – Community Selection. Available from: https://www.arb.ca.gov/board/res/2018/res18-37.pdf?_ga=2.16620022.1778124676.1548719155-1155382275.1462320702. Accessed: May 2019.

CARB. 2018. Community Air Protection Blueprint. Available from: https://ww2.arb.ca.gov/sites/default/files/2018-10/final_community_air_protection_blueprint_october_2018.pdf. Accessed: May 2019.

CARB. 2018. Annual Monitoring Network Report. Appendix A. June. Available at: https://www.arb.ca.gov/aqd/amnr/amnr2018appa.pdf. Accessed: May 2019.

CARB. 2017. *Standard Operating Procedures for Data Management System, AQSB SOP 606*. March. Available from: https://www.arb.ca.gov/airwebmanual/aqsbdocs1/AQSB%20SOP%20606%20(Data%20Management%20System).pdf?_ga=2.140093939.130531515.1557518709-959186382.1528487942. Accessed: May 2019.

CARB. 2016. *Standard Operating Procedures for Data Review and Validation, AQSB SOP 610, Second Edition*. March. Available from: https://www.arb.ca.gov/airwebmanual/aqsbdocs1/AQSB%20SOP%20610%20%28Data%20Review%29.pdf?_ga=2.117519681.937051405.1557726604-532886017.1555607187. Accessed: May 2019.

CARB. 2003. *Standard Operating Procedures for Met-One Instruments Beta Attenuation Mass Monitor (BAM-1020), AQSB SOP 400, First Edition*. June. Available at: https://arb.ca.gov/airwebmanual/aqsbdocs1/400sop200306.pdf. Accessed: May 2019.

CARB. 2003. *Standard Operating Procedures for Rupprecht & Patashnick Co., Inc. PPartisol-Plus Model 2025 Sequential Air Sampler (R&P Sequential FRM)*. June. Available from: https://arb.ca.gov/airwebmanual/aqsbdocs1/404sop200301.pdf. Accessed: May 2019.

CARB. 2001. *Air Quality Monitoring Quality Assurance Audit Procedures Manual*. October. Available from: https://www.arb.ca.gov/aaqm/qa/qa-manual/vol5/v5apxy.pdf?_ga=2.194178925.1329027809.1557760596-483290622.1543507065. Accessed: May 2019.

CARB. 1996. *Air Monitoring Quality Assurance, Volume II, Standard Operating Procedures for Air Quality Monitoring, Appendix AA, Meteorological Parameter Procedures for Inside/Outside Temperature*. June. Available from: https://www.arb.ca.gov/airwebmanual/aqsbdocs1/v2apxaa.pdf?_ga=2.108058186.937051405.1557726604-532886017.1555607187. Accessed: May 2019.

CARB. 1995. *Air Monitoring Quality Assurance, Volume II, Standard Operating Procedures for Air Quality Monitoring, Appendix V, Meteorological Parameter Procedures for Wind Direction Sensors*. September. Available from: https://www.arb.ca.gov/airwebmanual/aqsbdocs1/v2apxv.pdf?_ga=2.108058186.937051405.1557726604-532886017.1555607187. Accessed: May 2019.

CARB. 1995. *Air Monitoring Quality Assurance, Volume II, Standard Operating Procedures for Air Quality Monitoring, Appendix T, Meteorological Parameter Procedures for Wind Speed Sensors*. July. Available from: https://www.arb.ca.gov/airwebmanual/aqsbdocs1/v2apxt.pdf?_ga=2.108058186.937051405.1557726604-532886017.1555607187. Accessed: May 2019.

CARB. *BAM 1020 Particulate Monitor Operation Manual*. Available at: https://www.arb.ca.gov/airwebmanual/instrument_manuals/Documents/BAM-1020-9800_Manual_Rev_U.pdf. Accessed: May 2019.

CARB. *Laboratory Standard Operating Procedures – Ambient Air*. Available at: https://ww2.arb.ca.gov/laboratory-standard-operating-procedures-ambient-air. Accessed: May 2019.

Comite Civico del Valle. *Identifying Violations Affecting Neighborhoods Network.* Available from: https://ivanonline.org/. Accessed: May 2019.

Department of Internal Relations. *California Code of Regulations §2299 - 2989, Electrical Safety Orders*. Available from: https://www.dir.ca.gov/title8/sub5.html. Accessed: June 2019.

Department of Internal Relations. *California Code of Regulations §3273, Working Area*. Available from: https://www.dir.ca.gov/title8/3273.html. Accessed: June 2019.

Department of Internal Relations. *California Code of Regulations §3276, Portable Ladders*. Available from: https://www.dir.ca.gov/title8/3276.html. Accessed: June 2019.

Department of Internal Relations. *California Code of Regulations §3277, Fixed Ladders*. Available at: https://www.dir.ca.gov/title8/3277.html. Accessed: June 2019.

Department of Internal Relations. *California Code of Regulations §3278, Use of Fixed Ladders*. Available from: https://www.dir.ca.gov/title8/3278.html. Accessed: June 2019.

Department of Internal Relations. *California Code of Regulations §3395, Heat Illness Prevention*. Available from: https://www.dir.ca.gov/title8/3395.html. Accessed: June 2019.

Graeme N. Carvlin, Humberto Lugo, Luis Olmedo, Ester Bejarano, Alexa Wilkie, Dan Meltzer, Michelle Wong, Galatea King, Amanda Northcross, Michael Jerrett, Paul B. English, Donald Hammond & Edmund Seto. 2017. *Development and field validation of a community-engaged particulate matter air quality monitoring network in Imperial, California, USA, Journal of the Air & Waste Management Association, 67:12, 1342-1352*, DOI: 10.1080/ 10962247.2017.1369471.

Imperial County Air Pollution Control District (ICAPCD). 2018. *Imperial County 2018 Redesignation Request and Maintenance Plan for Particulate Matter Less Than 10 Microns in Diameter.* October 23. Available from: https://www.arb.ca.gov/planning/sip/planarea/imperial/sip.pdf. Accessed: May 2019.

ICAPCD. 2018. Imperial County AB 617 Community Nominations. Submitted in partnership with Comite Civico del Valle, Inc. August 3. Available from: https://ww2.arb.ca.gov/resources/documents/imperial-county-ab617-community-nominations-submitted-partnership-comite-civico. Accessed: May 2019.

ICAPCD. 2018. *Imperial County 2018 Annual Particulate Matter Less Than 2.5 Microns in Diameter State Implementation Plan.* April. Available from: https://www.arb.ca.gov/planning/sip/planarea/imperial/final_2018_ic_pm25_sip.pdf. Accessed: May 2019.

ICAPCD. 2017. *Imperial County 2017 State Implementation Plan for the 2008 8-hour Ozone Standard.* September. Available from: https://www.arb.ca.gov/planning/sip/planarea/imperial/2017O3sip_final.pdf. Accessed: May 2019.

IVAN. *Air Monitoring Imperial Valley Air Quality.* Available from: https://ivan-imperial.org/air. Accessed June 2019.

Legal Information Institute. *40 CFR Part 50, Appendix K.* Available from: https://www.law.cornell.edu/cfr/text/40/appendix-K_to_part_50. Accessed: May 2019.

Legal Information Institute. 40 CFR Part 50, Appendix L. Available from: : https://www.law.cornell.edu/cfr/text/40/appendix-L_to_part_50. Accessed: May 2019.

Legal Information Institute. *40 CFR Part 50, Appendix N.* Available from: https://www.law.cornell.edu/cfr/text/40/appendix-N_to_part_50. Accessed: May 2019.

Legal Information Institute. 40 CFR Part 53. Available from: https://www.law.cornell.edu/cfr/text/40/part-53. Accessed: May 2019.

Legal Information Institute. 40 CFR Part 58, Appendix A. Available from: https://www.law.cornell.edu/cfr/text/40/appendix-A_to_part_58. Accessed: May 2019.

Legal Information Institute. *40 CFR Part 58, Appendix D.* Available from: https://www.law.cornell.edu/cfr/text/40/appendix-D_to_part_58. Accessed: May 2019.

Legal Information Institute. *40 CFR Part 58, Appendix E.* Available from: https://www.law.cornell.edu/cfr/text/40/appendix-E_to_part_58. Accessed: May 2019.

Met One Instruments, Inc. BAM 1020 Particulate Monitor Operation Manual Revision U. Available from: https://metone.com/wp-content/uploads/2019/04/BAM-1020-9800-Manual-Rev-U.pdf. Accessed: May 2019.

Office of Environmental Health Hazard Assessment (OEHHA). *CalEnviroScreen 3.0.* Available from: https://oehha.ca.gov/calenviroscreen. Accessed: May 2019.

OEHHA. *Toxic Air Contaminants.* Available from: https://oehha.ca.gov/air/toxic-air-contaminants. Accessed: May 2019.

UCLA Center for Health Policy Research. California Health Interview Survey. Available from: http://healthpolicy.ucla.edu/chis/Pages/default.aspx. Accessed: May 2019.

United States Environmental Protection Agency (USEPA). 2019. *Guidance on the Preparation of Demonstrations in Support of Requests to Exclude Ambient Air Quality Data Influenced by High Wind Dust Events Under the 2016 Exceptional Events Rule.* April 4. Available from: https://www.epa.gov/sites/production/files/2019-04/documents/high_wind_dust_event_guidance.pdf. Accessed: May 2019.

USEPA. 2016. *Quality Assurance Guidance Document 2.12. – Monitoring $PM_{2.5}$ in Ambient Air Using Designated Reference or Class I Equivalent Methods.* January. EPA-454-B-16-001. Available from: https://www3.epa.gov/ttnamti1/files/ambient/pm25/qa/m212.pdf. Accessed: May 2019.

USEPA. *AirNow.* Available from: https://airnow.gov/. Accessed: May 2019.

USEPA. *Air Quality System (AQS).* Available from: https://www.epa.gov/aqs. Accessed: May 2019.

USEPA. *Asthma and Outdoor Air Pollution.* EPA-452-F-04-002. Available from: https://www3.epa.gov/airnow/asthma-flyer.pdf. Accessed: May 2019.

USEPA. *Criteria Air Pollutants.* Available from: https://www.epa.gov/criteria-air-pollutants. Accessed: May 2019.

USEPA. *Outdoor Air Quality Data: Download Daily Data.* Available from: https://www.epa.gov/outdoor-air-quality-data/download-daily-data. Accessed: May 2019.

APPENDIX A
COMMUNITY MEETING SUMMARY
[PENDING]

APPENDIX B
AB 617 COMMUNITY STEERING COMMITTEE CHARTER

Action Item

Early Reduction Project- CUSD Parking Lot Paving Project

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Imperial County Air Pollution Control District
July 3, 2019

To: **AB 617 Community Steering Committee (El Centro-Calexico-Heber)**

Re: **Emission Reduction Project in Community Corridor – Calexico Unified School District**

Calexico Unified School District (CUSD) submitted a Project Proposal to the Imperial County Air Pollution Control District (Air District) in late 2018, and a modified proposal in May 2019, for the paving of two parking lots (one bus lot and one staff parking lot) located at CUSD's Maintenance & Operations Department, 1085 Andrade Ave. in Calexico, CA. The project would assist the ICAPCD with mitigating fugitive dust emissions produced in Calexico, and in turn improve the health risk of residents in the AB 617 Community Corridor of El Centro-Calexico-Heber. CUSD entered into an updated Funding Agreement with the Air District on June 4, 2019, for a grant award totaling $406,480.

The Staff Lot and Bus Lot are utilized year round with an average of 165 trips per day and 82 trips per day respectively. The square footage of the existing Bus Lot is 29,118 sq. ft., and the square footage of the existing Staff Lot is 37,795 sq. ft. The updated costs for the paving of the Staff Lot is $110,200 and $296,280 for the Bus Lot, which totals the grant award amount of $406,480.

The below tables shows the resulting combined emissions reductions and cost effectiveness ($ per ton and $ per lb of PM10 emissions removed) for the paving of these two parking lots at CUSD in Calexico:

Project Life	7	Years
Uncontrolled Emissions Reduction	5.013	TPY
Considering control measures efficiency	55%	(watering twice a day)
Controlled emissions (Actual Reductions)	**2.26**	**TPY**
Cost Effectiveness	**$26,780.65**	**$/ton of PM10**
Cost	**$13.39**	**$/lb of PM10**

Agency Update

May Q&A

Question	Answer	Answer Provided By	Date Question Asked	Date Answer Provided to CSC
How is pollution contributing to Autism/other health conditions and what are some ways to study or measure and evaluate?	This question should be directed to a state or local health department.	CARB	8-May-19	
Why did CARB specifically identify two feedlots on their stationary source map? Why not identify all 21 types of stationary sources? (page 5 of CARB presentation April 10th)	For the initial inventory presentation to the CSC on April 10th, CARB staff worked with District staff to identify what level of information was useful to the community to actively engage in the development of emission inventory and future strategies to reduce emissions. Maps, charts, and detailed handout tables were developed to present preliminary inventory results to enable a productive discussion - most importantly to seek valuable input and feedback from the CSC and the community, to both improve emission estimates and gather knowledge of local emission sources of concern. Example maps were shown during the presentation for top emission sources/activities for a few selected pollutants like PM10 and TOG that the CSC had identified as important to the community. Among stationary sources, feedlots had the highest emissions for PM10 and TOG. It was not CARB's intention to specifically identify feedlot operations in any way. We agree with your comments that it is important to look at and identify all emission sources to provide a comprehensive profile of sources and emissions in the community. Though detailed emission data (in tons per year for criteria pollutants and pounds per day for toxics) were provided within the handouts distributed during the CSC meeting, we agree with your comments that it was not readily available as part of the inventory presentation. In the future, we will include other pollutants of concern, and also look at ways to better present technical emission inventory data that are easily understood and provide enough context for meaningful discussion.	CARB	8-May-19	

In the case of feedlots, the speciation profile was developed taking measurements from an actual feed lot in CA	VOC, PM10, and ammonia emissions for feedlots were calculated using Imperial County Air Pollution Control District's approved methodology for dairy and feedlot operations in Imperial County. In 2016, Imperial County APCD released an updated methodology to reflect emissions from these sources after the adoption of Rule 217, Large Confined Animal Facilities Permits Required. To view a copy of the methodology, please visit https://www.arb.ca.gov/ei/areasrc/districtmeth/imperial/2016mar16_dairyfeedlotops.pdf. Emission factors from this report were combined with the activity data gathered from the 2017 annual reports for permits 3669 and 3980 provided by the District to estimate emissions from dairy and feedlot facilities operating in Imperial County. The attached excel sheet shows how emissions are estimated for the feedlots using the District methodology. The feedlot and dairy PM emission factor is described in "Chapter 5" (page 71): https://ww3.arb.ca.gov/research/apr/past/a6-175-32b_i.pdf. A screenshot of the me **5.10 Dairy/Feedlot Emissions** One sample set of dairy emissions was collected at a dairy in the Visalia area. It was assumed that dairy and feedlot emissions would be similar in nature. The size distribution of the composite was very similar to the other dust sources (Tables 3.5-2 and 3.5-3), suggesting that most of the emissions are simply entrained dust. However, not surprisingly, the organic carbon, nitrate, and ammonium content were significantly increased in the emissions from the dairy as compared to typical agricultural soil collected within a few kilometers of the dairy. Other chemical species also appeared elevated (Na^+, Cl, P, and K^+). The higher content of organic compounds and other waste-derived chemical species in the emissions had the effect of depressing the concentration of the "geological" chemical species (Al, Si, Ti, Mn, Fe, and non-water-soluble K) in the dairy emissions in contrast to the non-impacted nearby agricultural soil. Table 5.10-1 compares the organic carbon content and the geological chemical species concentrations in the <10μ size fraction of dairy emissions and agricultural soil data. While the majority of the dairy emissions are in the coarser size fractions (2.5μ-10μ and >10μ)(Table 3.5-3), measurable mass was also collected on the <1μ and <2.5μ filters. The percent composition of organic carbon, nitrate, and ammonium in the finer size ranges is higher than in the coarser size ranges (Table 5.10-2). This finding is consistent with secondary organic and nitrogen-containing compounds originating from dairies and feedlots.	CARB	8-May-19	

What criteria/pollutants are non-attainment and a primary concern for improvement?	Imperial County is currently in nonattainment for the 24-hour PM10 standard of 150 ug/m3, the annual PM2.5 standard of 12 ug/m3, and the 8-hour ozone standard of 75 ppb. Ambient PM10, PM2.5, and ozone concentrations in Imperial County are of critical concern since these pollutants may impact the health of area residents. These pollutant levels also exceed federal air quality standards. High PM10 levels typically occur each year in Imperial County due to dust emissions from both natural and man-made sources. PM10 levels may increase substantially during high wind events common throughout the year. Increased control on dust sources, including the desert areas in the western portion of the County, could significantly reduce PM10 emissions. For PM2.5, the monitor located in Calexico often records the highest concentrations in the County, due in large part to the impact of cross-border sources in Mexicali, which is located less than 1 mile from the Calexico monitoring station. Sources in Mexicali such as dirty vehicles, the long wait times at the Ports-of-Entry, uncontrolled and/or unregulated burning of agricultural debris or refuse, industrial emissions, feedlots, unpaved roads, and windblown dust all add to emissions generated within Imperial County, and contribute to the PM2.5 and PM10 levels that are present in the bi-national air shed shared by California and Mexico.	CARB	8-May-19	
The US- EPA funded a PM10 source apportionment student of the Imperial Valley/Mexicali Valley to characterized cross border transport of PM10 as well as identifies areas and point sources of particulate.	Comment noted.			

The study was conducted by Desert Research, I mistrust in the early 90's. The report was authored by Drs. Judy Chow and John Watson. Findings from this study may prove useful to the monitoring goals of the CSC. Is there any transportation data (Cal Trans) that can be provided for SR86 & SR11? I don't see my propose monitors in SR-111 area.	Comment noted. With regards to transportation data, this request should be directed to the California Department of Transportation.	CARB	8-May-19	
Why is Calexico not monitored like other cities?	The Calexico station monitors for ozone, nitrogen dioxide, carbon monoxide, sulfur dioxide, PM10, PM2.5, PM2.5 speciated, toxics, and hexavalent chromium. Compared to other sites within the Imperial Basin like El Centro, Brawley, etc., Calexico measures much higher for PM2.5 and its location near the international border provides the opportunity to investigate pollution transport from Mexico to the US. These are expensive monitoring efforts and in every area of CA, the site with the highest concentrations is outfitted with the most equipment. The idea is that concentrations at other sites will be much lower, unless there is a unique pollution source, in which case you could pursue source monitoring. Monitoring at Calexico differs from other cities in other air districts due to differing regional sources.	CARB	8-May-19	

Can you include levels of toxic pollutants that are considered dangerous or non-attainment in future presentations?	Unlike criteria pollutants, toxic air contaminants don't have an ambient air concentration threshold below which air quality can be considered "acceptable" or "attainment." Instead, population-wide health risks are estimated through health risk assessments (HRAs) that require a detailed analysis of the pollutant dispersion into the environment and the potential for human exposure. In the absence of HRA data, the toxicity and amount of the pollutants emitted by a source can be used to assess the potential for health impacts; however, the actual health risks will be determined by the amount of exposure at an individual or population-wide level. CARB staff are working on developing toxicity-weighted emissions (pounds of emissions multiplied by a toxicity factor determined by the Office of Environmental Health Hazard Assessment)-- and will be presenting those in future meetings. CARB is working on developing toxicity weighed emissions (which will consider the risk from a particular toxic air contaminant) and will be presenting those in future meetings. For a list of pollutants that are currently in non-attainment in Imperial County, please see question 3 (above).			
Does the IVAN network sample on the same 6 day schedule as CARB/ICAPCD equipment?	The Calexico speciation air sampling system (SASS) for PM samples on the one in 6 day schedule and the data takes some time to report (possibly 2 months) due to filter analysis and data processing. We have PM10 and PM2.5 monitors at both El Centro and Calexico, they include: The Federal Equivalency Method BAM 1020s that sample for PM10 and PM2.5 and continuously collect and report data every hour to imperialvalleyair.org, AQMIS2 and Airnow, reviewed and validated data takes approximately 2 months to report to AQS. The FRM PM2.5 Partisol 2025s are filter-based (so these are manual) but they sample either every third day (El Centro) or daily (Calexico) and due to filter analysis and data processing it takes some time (possibly 2 months) before the data is uploaded onto EPA's AQS. The Dylos sensors sample every minute, aggregate/record every 5 minutes, and report every 5 minutes. Low cost sensors are a great tool to identify hotspots and provide real-time hyper-local data that can help guide personal activity to reduce exposure, but the data can't be used for regulatory or enforcement actions. FRM/FEM data on the other hand, undergoes a strict QA/QC process.	CARB	8-May-19	

Will any IVAN monitors be co-located with ICAPCD/CARB particulate monitor?	CCV is open to collocation with regulatory monitors at government sites. Depends on the decision of the committee whether they would want a monitor collocated at these locations within the corridor. Currently, CCV already has 2 monitors at regulatory sites in Calexico and Brawley.	CCV	8-May-19	
Does the IVAN network sample on the same 6 day schedule as CARB/ICAPCD equipment?	IVAN monitors report in real-time; they measure at 1 second intervals with a 5 minute average reported on the IVANAir.org website.	CCV	8-May-19	
Dylos have been ineffective therefore how would you guarantee they will be the best choice for our communities, the misuse of public funds should be avoided.	The use of Dylos is to leverage the already established infrastructure of the community monitoring network. Dylos are a tool that has been validated by the Imperial project that established the IVAN network and has been tested by ARB and South Coast AQSPEC; regulatory agencies that test new sensors. Understand concern for the management of limited funds but establishing a new data management infrastructure, data displays, and other tools that IVAN use with the Dylos sensors is leveraging the previous investments made in Imperial County over the last 5 years.	CCV	8-May-19	
Currently, 40 monitors already exist for the past years and pollution hasn't decreased.	Monitoring is not the only tool to reducing emissions, but it does help inform the community and create new initiatives that bring resources to reduce them. Monitoring is one of many tools and not the only driver behind reducing emissions, we can leverage the information from monitoring to produce the best emissions reductions programs strategies.	CCV	8-May-19	
Are the Blue Dylos that same as the ones as CCV? Or do they have an upgrade?	The model that CCV employs in the IVAN network is the Dylos DC1700 with custom firmware by the Dylos corporation.	CCV	8-May-19	
How were the proposed sites chosen?	Proposed sites were chosen based on observations of the community from a lifelong resident of Calexico and El Centro. Proposed sites were for CSC consideration but not final recommendation, just to inform what could be looked at.	CCV	8-May-19	

Is there a justified reason for the proposed suggestion?	Observations from the sites proposed; ie. Idling freight traffic, traffic congestion, and observed lax regulation of emissions in Mexicali/Mexico (border).	CCV	8-May-19	
How has pesticide use changed over the past couple years?	Use trends vary from year to year depending upon weather conditions, pest populations, and commodities markets (this affects which crops are planted and when). It is hard to generalize or predict these trends; however, use trends are summarized by the California Department of Pesticide Regulations. A few of those reports can be found here: https://www.cdpr.ca.gov/docs/pur/purmain.htm. Further, pesticide regulations in California are prone to regular changes and these tend to have significant changes on pesticide use. Generally, regulations are intended to mitigate some risk or hazard associated with various pesticide uses; so you could generalize that with each regulatory change, there is a corresponding effect toward increased safety. One recent example is regarding chlorpyrifos. It became a restricted material in 2015 and we observed a dramatic decrease in local use. Then in 2019, new conditions of use were adopted that are much more restrictive and use has dramatically changed once again. Thus far in 2019, there have been no uses of chlorpyrifos in Imperial County.	ICAC	8-May-19	
What training is done for workers who are applying pesticides?	Workers who are applying pesticides are required by California Regulations to receive annual training on general pesticide safety and the specific pesticide labels that they will be applying. The training requirements are outlined in the attached code section and I would say that they are comprehensive. Additionally, if the pesticides that they apply require the use of a respirator, they are also required to receive annual respirator training.	ICAC	8-May-19	

Are any monitored pesticides available for home use?	Yes, 3 out of the 7 monitored pesticides have some products that are available for residential use (these products include roach and ant killers, bait stations, etc.). However, most of the use is due to agricultural applications. In addition, some of these monitored pesticides are restricted materials which are only available for purchase and application to an applicator with a valid pesticide applicator license.	CA DPR	8-May-19	
What does pesticide monitoring cost?	It depends on the scope of the monitoring study. For a typical intensive seasonal air monitoring study, like the one conducted by CARB in Imperial County in which they looked at 5 communities (1 site per community) for 7 organophosphates 4 times per week for 10 weeks, it can be $75,000-100,000 per study. Cost for a Pesticide Air Monitoring Network sampling site, which includes collection of 1 sample per week analyzed for the presence of 31 pesticides on a year-round basis, is around $150,000 per year.	CA DPR	8-May-19	
How did you pick the pesticides that were monitored in 2018?	DPR gives higher-risk pesticides higher priority for monitoring. DPR selected pesticides to monitor based on the following criteria: 1) Pounds of use in or around an area/region (indicator of exposure) 2) Volatility of the pesticide (indicator of exposure) 3) DPR's risk assessment priority (indicator of toxicity) 4) Feasibility of inclusion into currently used monitoring methods	CA DPR	8-May-19	

Is there other monitoring that DPR has conducted in Imperial County in the last 5 years? Is that data available?	Yes, in 2014, a pesticide application site monitoring study for chlorpyrifos was conducted in Imperial County. The completed monitoring report is available at: https://www.cdpr.ca.gov/docs/emon/airinit/air_monitoring_reports/2017_report_monitoring_chlorpyrifos.pdf While the above study is not an ambient air monitoring study, it is the only other pesticide study conducted in Imperial County within the last 5 years.For clarification, please see below for the difference between an application-site and a seasonal ambient monitoring study: Application-site monitoring involves monitoring air concentrations next to applications of a specific pesticide for several days to estimate acute exposures. While for seasonal ambient monitoring, air samples are collected for several weeks in communities near high-use regions and during high-use periods to estimate seasonal exposures to a single pesticide	CA DPR	8-May-19	
What training is done for workers who are applying pesticides?	Per federal and state requirements, all workers that apply pesticides must be properly trained. To get more information on the various worker requirements, please see DPR's Worker Health and Safety Branch's website: https://www.cdpr.ca.gov/docs/whs/worker_protection.htm	CA DPR	8-May-19	

How has pesticide use changed over the past couple years?	Pesticide use can vary greatly depending on the pesticide, crop, and region of interest. Therefore, without knowing what pesticide is being inquired about, it is difficult to address this question. California has one of the most robust pesticide reporting frameworks in the world, and as such, it can be accessed to determine use patterns for all pesticides usage in California. Specifically, in 1990, DPR established a comprehensive program for reporting agricultural use of pesticides. Under the program, pesticide applications to agricultural sites must be reported monthly to county agricultural commissioners, who in turn, report that information to DPR. Detailed reports are required for applications used to produce agricultural commodities, such as applications to grape vineyards and cotton fields. Specifically: • The pesticide use reports for production agricultural use include information for each individual application, including the product applied, the amount applied, crop/site treated, date applied, and location (within a 1 x 1 mile area). • Summary pesticide use reports are required for non-production agricultural and some non-agricultural uses. • Non-production agricultural uses include applications to approximately 20 sites, such as golf courses, cemeteries, and roadsides. Non-agricultural uses that must be reported include applications by structural pest control businesses and applications for vector control. • Some industrial (e.g., fumigations of harvested commodities), institutional (e.g., schools), and veterinarian uses must be reported. • Pesticide use reports for non-production agricultural and non-agricultural uses include the product applied, monthly total amount applied, month applied, and county of application. • Uses by homeowners and consumers require no reporting. DPR's Pesticide Use Database can be accessed at following site: https://www.cdpr.ca.gov/docs/pur/purmain.htm	CA DPR	8-May-19	

Is pesticide testing done in summer months? I saw 2018 was done in the winter months.	Depending on the study, pesticide air monitoring can be conducted during a selected high-use time period or year round. For the seasonal air monitoring study conducted in Imperial County, the use patterns for the 7 organophosphates monitored indicated that the high-use season was during the winter months of January, February, and March. Different pesticides and regions have different high-use time periods and are highly dependent on the pesticide of interest and the crops treated. Additional Background and resources relating to pesticide use and monitoring can be accessed at: https://www.cdpr.ca.gov/docs/emon/airinit/community_monitoring.htm	CA DPR	8-May-19	
We would like clarity on outreach to set hospital/impact perspective	The ICAPCD is working to establish a working relationship with the Imperial County Public Health Department and El Centro Regional Medical Center to provide more outreach and education to the community.	ICAPCD	8-May-19	
What is the cost of a community monitor and maintenance?	The APCD will contract CCV to conduct the AB617 Community Monitoring as CCV has an existing community monitoring network and has the experience to maintain it.	ICAPCD	8-May-19	
Will there be a budget breakdown of the funds for outreach and education? Who is responsible for outreach and education?	Yes, a budget break down for the AB617 Monitoring Plan will be proposed and will need the approval of the AB617 CSC and it includes outreach and education. The APCD and CCV are the resposible the outreach and education.	ICAPCD	8-May-19	
Is APCD open to proposal for AB 617 projects?	Yes, the next phase of AB617 is an Emission Reduction Program where the AB617 CSC will propose projects in the corridor.	ICAPCD	8-May-19	
Will there be a transparent process to compete for funds?	Yes, all material, budget, projects, etc is public information and will be posted the AB617 website.	ICAPCD	8-May-19	
Are projects only open to agencies?	Projects proposals are welcome from the community. However the AB617 CSC will vote of the projects that have a direct benefit to the community.	ICAPCD	8-May-19	

Agency Update

List of Corridor Schools for Indoor Air Filtration Projects

AB 617 Corridor List of Schools

CALEXICO UNIFIED SCHOOL DISTRICT

901 Andrade Avenue (P.O. Box 792) P: (760) 768-3888
Calexico, CA 92231

District Office:
Carlos Gonzales, Acting Superintendent cgonzalez@cusdk12.org
Janet Burgos, Senior Executive Assistant jburgos@cusdk12.org
Elisa Ramirez, Asst. Superintendent of Educational Services eramirez@cusdk12.org
Carolina Rodriguez, Provisional Asst. Superintendent of Business crodriguez@cusdk12.org
Dennis Price, Director of Special Ed. & Guidance Services dprice@cusdk12.org
Claudia Montaño, Director of State & Federal Projects claudiam@cusdk12.org
Christine Colunga, Director of Academic Services ccolunga@cusdk12.org

Aurora High (Continuation)
641 Rockwood Avenue P: (760) 768-3940
Calexico, CA 92231 F: (760) 768-1459
John Moreno, Director of Alternative Education jmoreno@cusdk12.org

Blanche Charles (K-6th)
1201 Kloke Road P: (760) 768-3910
Calexico, CA 92231 F: (760) 768-1462
Siria Hurtado, Principal shurtado@cusdk12ca.org

Calexico High School (10th-12th)
1030 Encinas Avenue P: (760) 768-3980
Calexico, CA 92231 F: (760) 357-9640
Gabrielle Williams-Ballesteros, Principal gwilliams@cusdk12.org
Alba Zazueta, Asst. Principal azazueta@cusdk12.org
aalvarado@cusdk12.org

Calexico High School 9th Grade:
824 Blair Ave P: (760) 768-3950
Calexico, CA 92231
Martin Leyva , Asst. Principal mleyva@cusdk12.org
Cynthia Salgado, Asst. Principal csalgado@cusdk12.org
mbeltran@cusdk12.org

Cesar Chavez Elementary School (K-6th):
1251 E. Zapata P: (760) 768-6400
Calexico, CA 92231 F: (760) 357-8587
Mayra Molina, Principal mmolina@cusdk12.org

Dool School (K-6th)
800 Encinas Ave. P: (760) 768-3820
Calexico, CA 92231 F: (760) 357-8909
Joan Hanson, Principal jhanson@cusdk12.org

Enrique Camarena (7th-8th):
800 E. Rivera Ave. P: (760) 768-3808
Calexico, CA 92231 F: (760) 357-5909
Diego Romero, Principal dromero@cusdk12.org
Blanca Jimenez, Asst. Principal bljimenez@cusdk12org

Jefferson School (K-6th):
1120 Seventh Street P: (760) 768-3812
Calexico, CA 92231 F: (760) 768-1827
Alejandro Aviña, Principal aavina@cusdk12.org

CALEXICO UNIFIED SCHOOL DISTRICT (continued)

Kennedy Gardens School (K-6)
2300 Rockwood Avenue P: (760) 768-3842
Calexico, CA 92231 F: (760) 768-1670
Gabriela Flores, Principal gmiranda@cusdk12.org

Mains School (K-6th):
655 Sheridan Avenue P: (760) 768-3900
Calexico, CA 92231 Fax: (760) 768-1446
Bertha Noriega, Principal bnoriega@cusdk12.org

William Moreno Jr. High (7-8)
1202 Kloke Road P: (760) 768-3960
Calexico, CA 92231 F: (760) 768-1905
Mariano Velez, Principal mvelez@cusdk12.org
Korina Tabarez, Asst. Principal ktabarez@cusdk12.org

Rockwood School (K-6th):
1000 Rockwood Ave. P: (760) 768-3832
Calexico, CA 92231 F: (760) 768-1893
Jaime Santos, Principal jsantos@cusdk12.org
Linda Luna Administrative Assistant

AB 617 Corridor List of Schools

CENTRAL UNION HIGH SCHOOL DISTRICT

351 W. Ross Avenue — P: (760) 336-4500
El Centro, Ca 92243 — F: (760) 353-3606

District Office:

Renato Montaño, Superintendent — rmontano@cuhsd.net
Carol J. Taylor, Senior Administrative Assistant — ctaylor@cuhsd.net
Sheri Hart, Assistant Superintendent & Educational Services — shart@cuhsd.net
Arnold Preciado, Assistant Superintendent, Business Services — apreciado@cuhsd..net
Carol Moreno, Director of Human Resources — cmoreno@cuhsd.net

Central Union High School

1001 Brighton Ave — P: (760) 336-4300
El Centro, CA 92243 — F: (760) 353-3570
Craig Lyon, Principal — ctaylor@cuhsd.net
Adrienne Rodriguez, Assistant Principal Student Services — arodriguez@cuhsd.net
Tricia Petter, Asst. Principal of Curriculum — tpetter@cuhsd.net
Sandy Noujaim, Athletic Director — snoujaim@cuhsd.net
Elena Williams, School Secretary — ewilliams@cuhsd.net

Southwest High School

2001 Ocotillo Drive — P: (760) 336-4100
El Centro, CA 92243 — F: (760) 353-0467
Matt Phillips, Principal — mphillips@cuhsd.net
Sergio Rubio, Asst. Principal, Student Services — srubio@cuhsd.net
Mickaelle Bonfils-Roncal, Asst. Principal of Curriculum — mbr@cuhsd.net
Ruben Valenzuela, Athletic Director — rvalenzuela@cuhsd.net
Maria Sell, Administrative Secretary — msell@cuhsd.net

Desert Oasis High (Continuation)

1302 S. 3rd Street — P: (760) 336-4555
El Centro, CA 92243 — F: (760) 337-3952
Fernando O'Campo, Principal — focampo@cuhsd.net
Juanita Alaniz, Staff Secretary — jalaniz@cuhsd.net

Central Union Adult Education Center

2345 S. 2nd Ave. Ste. A — P: (760) 312-7050
El Centro, Ca. 92243
Tish Thompson, Adult Education Principal — tthompson@cuhsd.net

EL CENTRO ELEMENTARY SCHOOL DISTRICT

1256 Broadway Avenue — P: (760) 352-5712
El Centro, CA 92243 — F: (760) 352-7237

District Office:

Jon LeDoux, Superintendent — jledoux@ecesd.org
Kathy Lemos, Executive Secretary — klemos@ecesd.org
Ruben Castro, Associate Superintendent — rcastro@ecesd.org
Kristy Curry, Assistant Superintendent/CBO Administrative Business Services — kcurry@ecesd.org
Carla Arguilez, Director of Fiscal Services — carguilez@ecesd.org
Joy Ceasar, Director of Learning, Instruction and Accountability — jceasar@ecesd.org
Director of Maintenance Operations and Transportation:
Kim Dessert — kades@ecesd.org
Mike Reyla — mreyla@ecesd.org
Molly Diaz, Director of Child Nutrition — eatsmart@ecesd.org
Linda Morse, Sr. Director of Educational Services — lmorse@ecesd.org
Janice Lau, Director of Special Education/Student Services — jlau@ecesd.org
Antonio Romayor, Chief Technology Director — aromayor@ecesd.org
Olga Criman, Support Services Coordinator -ELL/Migrant — ocriman@ecesd.org

De Anza Magnet School (K-8)

1530 South Waterman Avenue — P: (760) 352-9811
El Centro, CA 92243 — F: (760) 352-0920
Maria J. Ambriz, Principal — mjambriz@ecesd.org
Noemi Ambrocio, School Secretary — nambrocio@ecesd.org

EL CENTRO ELEMENTARY SCHOOL DISTRICT (Cont.)

Desert Garden School (K-6)

1900 South 6th Street — P: (760) 352-2051
El Centro, CA 92243 — F: (760) 337-3802
Cecilia Heraz, Principal — cheraz@ecesd.org
Karen Jordan, School Secretary — jordan@ecesd.org

Harding School (K-6)

950 South 7th Street — P: (760) 352-4791
El Centro, CA 92243 — F: (760) 353-7204
Patti Weeks, Principal — pweeks@ecesd.org
Maria Fielder, School Secretary — mfielder@ecesd.org

Margaret Hedrick School (K-6)

550 S. Waterman Avenue — P: (760) 352-4750
El Centro, CA 92243 — F: (760) 353-6832
Esther Green, Principal — egreen@ecesd.org
Chrystela Salinas, School Secretary — csalinas@ecesd.org

Kennedy Middle School (7-8)

900 North 6th Street — P: (760) 352-0444
El Centro, CA 92243 — F: (760) 353-0325
Richard Sanchez, Principal — rsanchez@ecesd.org
Lynee Pacheco, Asst. Principal — lpacheco@ecesd.org
Rosie Hernandez, School Secretary — rhernandez@ecesd.org

Martin L. King Jr. School (K-6)

1950 Villa Avenue — P: (760) 337-6555
El Centro, CA 92243 — F: (760) 353-6714
Terri Ponce, Principal — tponce@ecesd.org
Mariza Arredondo, School Secretary — marredondo@ecesd.org

Lincoln School (K-6)

200 North 12th Street — P: (760) 352-3060
El Centro, CA 92243 — F: (760) 352-4477
Juan Aguilera, Principal — jaguilera@ecesd.org
Alice Quesada, School Secretary — aquesada@ecesd.org

McKinley School (K-5)

1177 North 8th Street — P: (760) 352-3225
El Centro, CA 92243 — F: (760) 353-2858
Jose Urena, Principal — jurena@ecesd.org
Anabel Reyes, School Secretary — areyes@ecesd.org

Sunflower School (K-6)

2450 Main Street — P: (760) 337-4890
El Centro, CA 92243 — F: (760) 337-4894
Jeanette Quiroz, Principal — jquiroz@ecesd.org
Roxie Gradillas, School Secretary — roxg@ecesd.org

B.T. Washington School (K-6)

223 South First Street — P: (760) 352-6611
El Centro, CA 92243 — F: (760) 370-3089
Norberto Nuñez, Principal — nnunez@ecesd.org
Dulce Solano, School Secretary — dsolano@ecesd.org

Wilson Jr. High School (7-8)

600 South Wilson Street — P: (760) 352-5341
El Centro, CA 92243 — F: (760) 337-3800
Maria Ambriz, Principal — mambriz@ecesd.org
Richard Hill, Assistant Principal — rhill@ecesd.org
Gerardo Sanchez, Assistant Principal — gsanchez@ecesd.org
Lisset Zier, School Secretary — lzier@ecesd.org

AB 617 Corridor List of Schools

HEBER ELEMENTARY SCHOOL DISTRICT

1052 Heber Ave.
Heber, CA 92249
P: (760) 337-6530
F: (760) 353-3421

District Office:

Juan Cruz, Superintendent — jcruz@hesdk8.org
Patty G. Marcial, Assistant Superintendent of Teaching and Learning — pattygm@hesdk8.org
Sergio Espinoza, Director of Special Projects — saespinoza@hesdk8.org
Stephanie Siqueiros, Senior Executive Assistant — ssiqueiros@hesdk8.org

Dogwood Elementary (K-3)

44 E. Correll Road
Heber, CA 92249
P: (760) 337-6530
F: (760) 482-5731
Jeralyn Shaw, Principal — jshaw@hesdk8.org
Darlene Herrera, Assistant Principal — dherrera@hesdk8.org

Heber School (4-8)

1052 Heber Ave.
Heber, CA 92249
P: (760) 337-6530
F: (760) 352-3534
Cynthia Silva, Principal — csilva@hesdk8.org
Darlene Herrera, Assistant Principal — dherrera@hesdk8.org

SAN DIEGO STATE UNIVERSITY

Imperial Valley Campus
720 Heber Avenue
Calexico, CA 92231
P: (760) 768-5500
F: (760) 768-5568
Gregorio Ponce, Ed.D., Dean — gponce@mail.sdsu.edu
Donna Castaneda, Associate Dean of Academic Affairs — dcastaneda@mail.sdsu.edu
Samuel Palma, Administrative Coordinator I — spalma@mail.sdsu.edu
Miguel Rahiotis, Assistant Dean of Student Affairs — mrahioti@mail.sdsu.edu
Bill Payne, Reference Librarian — bpayne@mail.sdsu.edu

IMPERIAL COUNTY OFFICE OF EDUCATION

ALTERNATIVE EDUCATION

Valley Academy School

253 E. Ross Road
El Centro, CA 92243
P: (760) 312-5500
F: (760) 312-5580
Monalisa Vitela, Senior Director — mvitela@icoe.org
Cynthia Trujillo — ctrujillo@icoe.org
OPEN, Principal

Calexico Academy School

813 Andrade Ave.
Calexico, CA 92231
P: (760) 312-5691

CSC MEMBERS: Please contact Air District Administrative Analyst Gil Rebollar at GilbertRebollar@co.imperial.ca.us if you have any questions or suggestions on additional school sites which should be included on this list.