

## SETTLEMENT AGREEMENT

This Settlement Agreement (Agreement) is entered into between the Great Basin Unified Air Pollution Control District (District) and the City of Los Angeles by and through its Department of Water and Power (collectively “City”) (the City and District to be referred to as the “Parties”) to resolve the City’s challenge to the District’s Supplemental Control Requirement (SCR) determination for the Owens Lake bed issued on December 21, 2005, and modified on April 4, 2006.

### RECITALS

#### WHEREAS:

- A. Owens Lake is located in Inyo County in eastern California, south of the town of Lone Pine and north of the town of Olancha.
- B. Large portions of the Owens Lake bed are comprised primarily of dry saline soils and crusts.
- C. The lake bed soils and crusts are a source of wind-borne dust during significant wind events, and contribute to elevated concentrations of particulate matter less than 10 microns in diameter (PM<sub>10</sub>).
- D. PM<sub>10</sub> is a criteria pollutant regulated by the federal Clean Air Act, 42 U.S.C. Section 7401 *et seq.*, as amended (CAA).
- E. Under the National Ambient Air Quality Standard (NAAQS) adopted pursuant to the CAA, PM<sub>10</sub> levels may not exceed an average concentration of 150 micrograms per cubic meter (µg/m<sup>3</sup>) during a 24-hour period more than one time per calendar year averaged over three years.
- F. The District has regulatory authority over air quality issues in the region where Owens Lake is situated.
- G. Under Health and Safety Code Section 42316, enacted by the California Legislature in 1983, the District has authority to require the City to undertake reasonable measures at Owens Lake in order to address the impacts of its activities that cause or contribute to violations of federal and state air quality standards, including but not limited to the NAAQS for PM<sub>10</sub>.
- H. In 1987, the United States Environmental Protection Agency (EPA) identified the Owens Valley Planning Area (OVPA), which encompasses

Owens Lake, as an area not meeting the NAAQS for PM<sub>10</sub>. In 1993, the OVPA was reclassified as a serious non-attainment area under the CAA.

- I. In 1997, the District adopted the Owens Valley PM<sub>10</sub> Demonstration of Attainment State Implementation Plan as required by the CAA (1997 SIP). In 1998, the District and the City agreed that the City would construct control measures on 16.5 square miles of the Owens Lake bed by the end of 2003 as part of a SIP revision in 1998.
- J. In 2003, through District Board Order 03111-01 (Order), the District required the City to construct dust control measures (DCMs) on an additional 13.3 square miles of the Owens Lake bed by the end of 2006, for a total of 29.8 square miles of dust control measures, as part of a Revised SIP (2003 SIP). The Order and 2003 SIP also established a process whereby the Air Pollution Control Officer of the District (APCO) must evaluate on at least an annual basis the potential need for additional DCMs and “watch areas” at Owens Lake bed in order to attain the NAAQS. The process involves a determination by the APCO and an opportunity for the City to present an alternative analysis.
- K. On December 21, 2005, the APCO issued the 2004/2005 SCR determination finding that the City would be required to implement DCMs on an additional 9.31 square miles of Owens Lake bed and identifying 0.66 square miles as “watch area.”
- L. On January 20, 2006, the City appealed the 2004/2005 SCR determination to the California Air Resources Board (CARB). The District disagreed that the determination was subject to such an appeal.
- M. On February 22, 2006, the City submitted an Alternative Analysis contesting aspects of the 2004/2005 SCR determination.
- N. On April 4, 2006, the APCO modified the SCR determination issued on December 21, 2005 to reduce the supplemental DCM area to 8.66 square miles and increased the “watch area” to 0.79 square miles (Modified SCR determination).
- O. On May 3, 2006, the City filed an appeal of the April 4, 2006 Modified SCR determination with the CARB. The District disagreed that the determination was subject to such an appeal.
- P. On May 4, 2006, the City filed a petition for writ of mandate challenging the APCO’s April 4, 2006 Modified SCR determination (*City of Los Angeles Department of Water and Power v. Great Basin Unified Air Pollution Control District*, Kern County Superior Court Case No. S-1500-

CV-258678, RJO). The Parties entered into mediation and a temporary stay of the litigation.

## AGREEMENT

NOW, THEREFORE, in consideration of the provisions herein contained and to resolve the disputes over methods to address air quality at Owens Lake, including the disputes over the SCR determination issued on December 21, 2005, and modified on April 4, 2006, the City and the District hereby agree as follows:

### DUST CONTROL MEASURES (DCMs)

1. The City shall apply DCMs as provided in this Agreement on additional areas of the lake bed beyond the 29.8 square miles required in the 2003 SIP.
  - A. The areas on the lake bed on which DCMs will be applied are designated in this Agreement as follows:
    - (i) The 12.7 square-mile area of additional DCMs shall be known as the 2006 Supplemental Dust Control Area (SDCA).
    - (ii) The 29.8 square miles of DCMs required by the 2003 SIP shall be known as the 2003 Dust Control Area (DCA).
    - (iii) The 0.5 square miles of natural drainage channels on the south area of the lake bed shall be known as the Channel Area.
    - (iv) The combined 43.0 square miles of DCMs and Channel Area shall be known as the Total Dust Control Area (TDCA).
    - (v) The SDCA, DCA, Channel Area and TDCA are delineated on the TDCA Map, attached as Exhibit 1. The SDCA and Channel Area coordinate descriptions are attached as Exhibit 2. The DCA coordinate description is contained in the 2003 SIP.
  - B. Minor adjustments may be made to the boundaries of the SDCA upon written request by the City to the District and written approval by the APCO, which approval shall not be unreasonably withheld. In the event of such modification, the boundaries of the TDCA shall also be modified to reflect the modified SDCA boundaries.
  - C. The City may, at its sole option, apply DCMs to additional areas outside the TDCA.
  - D. The City shall begin full operation of the DCMs within the SDCA as follows:

- (i) Moat and row controls shall be operational by October 1, 2009.
    - (ii) All other controls shall be operational by April 1, 2010.
  - E. Following the dates set out above in this Section, the City shall continuously operate and maintain the DCMs within the TDCA. The City shall continuously operate and maintain DCMs within the DCA as required under the 2003 SIP, except as otherwise provided in this Agreement.
- 2.
  - A. The City shall construct within the SDCA a minimum of 9.2 square miles of Shallow Flood dust controls. The Shallow Flood areas are delineated on the Dust Control Measure Map, attached as Exhibit 3.
  - B. On the remaining 3.5 square miles of the SDCA not specifically designated for Shallow Flood on the DCM Map (Exhibit 3), the City shall
    - (i) construct Shallow Flood, Managed Vegetation, or gravel cover, as described in the Dust Control Measures Description, attached as Exhibit 4, and which are currently approved as Best Available Control Measures (BACM) under the 2003 SIP; or
    - (ii) subject to Sections 3, 7 and 8, treat up to 3.5 square miles of the SDCA with the alternative dust control measure known as “Moat and Row,” as described in the DCM Description (Exhibit 4).
  - C. TDCA areas designated as Channel Area represent areas containing natural drainage channels having potentially significant resource issues and regulatory constraints. While these areas are not a part of the SDCA, they shall be addressed as part of the control strategy for the SDCA. However, it is acknowledged that the control strategy in this area may be subject to additional regulatory constraints, design considerations, and impacts caused by adjacent DCMs.
  - D. The internal control measure boundaries delineated on the DCM Map (Exhibit 3) are approximate and are subject to final written approval by the APCO. The areas designated on the DCM Map (Exhibit 3) for Shallow Flood and Moat and Row may be modified upon written request by the City to the District and written approval by the APCO, which approval shall not be unreasonably withheld.
- 3. All DCMs within the SDCA shall be designed, constructed, operated and maintained by the City to achieve the initial target minimum dust control efficiencies (MDCEs) shown on the MDCE Map, attached as Exhibit 5. The initial target MDCEs (Target MDCEs):

- A. Are based on the results of air quality modeling, as described in the 2003 SIP, conducted by the City and approved by the APCO for the period July 2002 through June 2006;
  - B. Assume 100 percent control efficiency in the 29.8 square miles of the DCA required under the 2003 SIP, except during the fall and spring ramping periods as described in Section 26, and achievement of the target MDCEs for the areas in the SDCA. Control efficiencies during the fall and spring ramping periods shall be based on modeling that accounts for reduced wetness cover pursuant to Sections 5 and 26;
  - C. Have been selected to achieve PM<sub>10</sub> concentrations that will not exceed the federal 24-hour PM<sub>10</sub> ambient air quality standard of 150 µg/m<sup>3</sup> (federal standard) at all historic shoreline (elevation 3600 feet above sea level) receptors.
- 4. Prior to April 1, 2010, the Target MDCEs may be modified, upon request of the City and written approval of the APCO, which approval shall not be unreasonably withheld, if the modified MDCEs meet the criteria set forth in the MDCE Selection Process Spreadsheet, attached as Exhibit 6, pursuant to Section 3.
  - 5. For the Shallow Flood areas identified in DCM Map (Exhibit 3), the percentage of each area that must be wetted shall be based on the Shallow Flood Control Efficiency Curve (SFCE Curve) attached as Exhibit 7, or an update of the SFCE Curve mutually agreeable to the Parties, to achieve the control efficiency levels in the MDCE Map (Exhibit 5).
  - 6. The Parties believe that the City's existing Managed Vegetation site may currently achieve a control efficiency of 99 percent. Therefore, the City shall continue to maintain and the District shall continue to monitor the site to ensure that it achieves 99 percent control efficiency. No later than July 1, 2007, the City shall submit to the District an operation and management plan for the City to maintain cover conditions that achieve 99 percent control efficiency in the Managed Vegetation areas. The plan shall be subject to written approval by the APCO, which approval shall not be unreasonably withheld. Prior to the time that the Managed Vegetation area is in compliance with an approved SIP, the District will not issue a Notice of Violation (NOV) for the existing Managed Vegetation area as long as:
    - A. From January 1, 2007, to the earlier of July 1, 2007 or the date when the City's operation and management plan is approved by the APCO, the City maintains its current operation and management practices for its Managed Vegetation areas; and

- B. After the APCO's written approval of the operation and management plan, the City implements all provisions of its operation and management plan; and
  - C. The City's Managed Vegetation area site does not cause an exceedance of the federal standard at the historic shoreline.
7. As Moat and Row is not a currently approved BACM dust control measure under the 2003 SIP, the City will develop, in consultation with the District, and conduct Moat and Row Demonstration Projects on the lake bed. These Demonstration Projects will be conducted on two or more locations on the lake bed outside of the DCA. The proposed location of these Demonstration Project areas are shown on attached Moat and Row Demonstration Project Map (Exhibit 8). The actual locations of the projects may be changed by the City, and in such event, the City shall notify the APCO in writing of the changed locations. The City will be the California Environmental Quality Act (CEQA) lead agency for implementation of the Moat and Row Demonstration Projects.
8. Based on results of the Moat and Row Demonstration Projects described in Section 7 and subject to Sections 2 and 3, the City in its sole discretion may decide which DCMs to implement in the areas designated for Moat and Row in Section 2 and Exhibit 3 of this Agreement. The City shall consult with the District before making its decision and inform the District of its decision in writing.
- A. Depending on the results of the Moat and Row Demonstration Projects, the measures implemented in these areas by the City may include Moat and Row, enhanced Moat and Row (*e.g.*, closer Moat and Row spacing, Moat and Row with some Shallow Flooding, Moat and Row with some vegetation), combined Moat and Row/Shallow Flood, MDCE-BACM, or BACM.
  - B. If the City implements Moat and Row, it shall design and construct Moat and Row to achieve the Target MDCEs described in Section 3. The Moat and Row configuration required to achieve these Target MDCEs will be decided solely by the City, after consultation with and written notification to the District.
  - C. In the event of a dispute regarding the City's proposed decision or action pursuant to Section 8.A or 8.B, either Party may initiate the Dispute Resolution Process pursuant to Section 32.
  - D. Upon written request of the City, the APCO shall determine in writing if Moat and Row and/or Enhanced Moat and Row constitutes BACM or MDCE-BACM, in accordance with the revisions to the 2003 SIP provided in Section 28.

## DUST IDENTIFICATION (DUST ID) PROGRAM

9. The Parties mutually recognize that a method for identifying sources of potential exceedances of the federal standard at the historic shoreline could be developed that is superior to and could replace or modify the current Dust ID Program.
  - A. The Parties will work cooperatively, with the participation of a mutually agreeable independent third party technical expert or experts under contract to the District and jointly managed by the Parties, in a good faith effort to develop, before April 1, 2010, an improved Dust ID Program. The APCO will implement all mutually-agreeable changes to the Dust ID Program and notify the City in writing of those changes.
  - B. The District will continue to work with the City after April 1, 2010 to further improve the Dust ID Program and will implement all additional mutually agreeable changes in a written decision.
  - C. In furtherance of efforts to improve the Dust ID Program:
    - (i) The Parties will promptly begin a mediated process for refining the Dust ID Program and resolving disputes.
    - (ii) The Parties will select a mutually agreeable expert or panel of independent third-party technical experts.
    - (iii) The District, after consultation with the City, will increase the number of PM<sub>10</sub> monitors at or near the historic shoreline. In all cases, the District will notify the City of the location of the monitors within 30 days of placement of the monitors. If a PM<sub>10</sub> monitor is located above the historic shoreline, the District will make reasonable attempts to account for non-lake bed sources that may affect the monitor.
    - (iv) The District, after consultation with the City, will modify the existing sand flux monitor network to concentrate on areas of special interest, and will, in all cases, notify the City of the modifications within 30 days of any modification.
    - (v) The Parties will establish mutually agreeable model performance measures. Such measures may, but are not required to, include a minimum model performance standard.
    - (vi) The District will make reasonable efforts to account for impacts of DCM construction activities.

10. The City will lead a joint effort with the District to develop methods for directly measuring PM<sub>10</sub> emission rates from the lake bed. The District will incorporate mutually agreeable methods into the Dust ID Program.
11.
  - A. If the City is in compliance with Sections 1 and 2 of this Agreement, the following shall apply to the time period before April 1, 2010.
    - (i) The APCO will not issue any further determinations regarding the need for SCRs that provide for additional requirements beyond those in this Agreement. However, the District will continue to use the Dust ID Program, as that program may be modified pursuant to Sections 9 and 10. The District will periodically advise the City of results in writing and may recommend actions to the City based on the model results.
    - (ii) Data collected before April 1, 2010 will not be used in future determinations requiring SCRs, except in those areas delineated as Study Areas on the Study Area Map attached as Exhibit 9 and described in Exhibit 2. Data collected from the Study Areas between July 1, 2006 and April 1, 2010 may only be used in SCR determinations after April 1, 2010, and may be used only in accordance with the current form of the Dust ID Program that is in effect after April 1, 2010.
    - (iii) The District will not issue an order requiring the City to implement any additional controls on any lake bed dust source areas in order to achieve the state PM<sub>10</sub> standard of 50 micrograms per cubic meter unless compelled to issue such an order by state law.
  - B. The District shall determine compliance with the state PM<sub>10</sub> standard based on concentrations only in the surrounding communities, unless otherwise compelled by state law.
12. The City, in consultation with the District, shall annually develop and provide to the District a Performance Monitoring Plan (PMP) to aid in its operation of the Owens Lake dust mitigation program on the Owens Lake bed.
  - A. The PMP will describe the measurements and methods used to verify the performance of the constructed DCMs and Moat and Row test areas. The PMP will also describe the measurements and methods used to maximize information on dust emissions from areas of special interest.
  - B. The City shall implement the PMP, and will use the results as a guide for making operational decisions about the type, location, timing, and level of dust control measures needed to prevent exceedances of the federal standard at the shoreline.

- C. The District may use information from the PMP to assist in determining the likely sources of dust emissions causing or contributing to exceedances (if any) of the federal standard at the shoreline.

SHALLOW FLOOD BACM REFINEMENT

- 13. The City shall have the option to conduct field testing to refine the wetness cover requirement to achieve 99 percent control efficiency in Shallow Flood areas within the DCA (Shallow Flood Cover Test).
  - A. The Shallow Flood Cover Test shall occur on one or more areas totaling not more than 1.5-square-miles, to be selected by the City and approved by the APCO, which approval shall not be unreasonably withheld, from within the TDCA areas requiring 99 percent control.
  - B. The Shallow Flood Cover Test design shall be prepared by the City and approved by the APCO, which approval shall not be unreasonably withheld, prior to implementation. Based on that design, the APCO will reasonably determine wetness cover requirements for the Shallow Flood Cover Test.
  - C. The City will be CEQA lead agency for the Shallow Flood Cover Test.
- 14. If the APCO reasonably determines in writing that DCMs in the TDCA have been operational for one full year (defined as 365 consecutive days) with no exceedance of the federal standard at monitors located at or above the historic shoreline caused solely by sources within the TDCA, the City shall be permitted to reduce the wetness cover by an average of 10 percent over Shallow Flood areas requiring 99 percent control efficiency, excluding areas identified in Section 14.C, provided that:
  - A. Application of the 10 percent reduction in wetness cover during the Fall and Spring Shallow Flood DCM Compliance periods set out in Sections 25 and 26 shall result in the lower of:
    - (i) The areal cover resulting from a 10 percent reduction; or
    - (ii) The areal cover required in Section 26.A.
  - B. To implement the reductions set out in this Section, the City shall be required to first submit a written Wetness Cover Plan to the District for reducing the wetness cover on the eligible areas. The Wetness Cover Plan shall take into account:

- (i) the results of testing carried out pursuant to Section 13, if conducted; and
    - (ii) the results of fall and spring Shallow Flood wetness cover reduction operations carried out pursuant to Section 26.
  - C. If, in any year, the Wetness Cover Plan proposes reductions in wetness cover greater than 10 percent in any portion of the Shallow Flood areas covered by the Plan (consistent with the 10 percent limit on the overall average reduction), the City shall obtain the additional written approval of the APCO, which approval shall not be unreasonably withheld.
  - D. In the event shoreline monitors show an exceedance of the federal standard, whether that exceedance is caused by sources within, outside, or both within and outside of the TDCA, no further reductions in wetness cover shall be permitted for any Shallow Flood area that has contributed to the exceedance, as determined by the methodology in Section 18 and subject to the provisions of Section 16.
  - E. Except as provided in Section 16, the City may continue to operate using reductions of wetness cover pursuant to a previously approved Wetness Cover Plan.
15. For each Dust Control Season (October 1 of each year through June 30 of the next year) that wetness cover reductions have taken place under the provisions of Section 14, the City shall prepare and submit to the District a written report summarizing the results of the wetness cover reductions within 90 days after conclusion of the corresponding Dust Control Season. The report shall document the percentage of wetness cover for Shallow Flood areas and the effect(s) of wetness cover reductions on PM<sub>10</sub> concentrations at the historic shoreline.
16. Any areas for which wetness cover has been reduced pursuant to Section 14 and that cause or contribute to an exceedance of the federal standard at the historic shoreline shall be remediated by the City under the Remedial Action Plan requirements pursuant to Sections 18 and 22 below.
- A. Subject to APCO written approval, which approval shall not be unreasonably withheld, the City may further reduce the wetness cover beyond that allowed in Section 14 provided that:
    - (i) The maximum 24-hour PM<sub>10</sub> shoreline monitor values for at least 365 consecutive days of operation following initiation of the last approved Wetness Cover Plan does not exceed 130 µg/m<sup>3</sup>; and
    - (ii) The City demonstrates to the reasonable satisfaction of the APCO that the modeled contributions from the lake bed for the same time

period set forth in Section 16.A.(i) plus the background of 20  $\mu\text{g}/\text{m}^3$  do not exceed 120  $\mu\text{g}/\text{m}^3$  at the historic shoreline.

- B. If the monitored values at the historic shoreline exceed 130  $\mu\text{g}/\text{m}^3$ , and it is determined that non-lake bed sources are contributing greater than 20  $\mu\text{g}/\text{m}^3$ , then the District will expeditiously seek to identify and require control of those non-lake bed sources so that the City may continue to implement efficient DCMs on the lake bed.
- C. If the City is entitled to further reduce wetness cover pursuant to this Section, the City shall prepare and submit an updated Wetness Cover Plan to the District to describe the wetness cover proposed for the subsequent, applicable Dust Control Season. The updated Wetness Cover Plan shall include:
  - (i) A map that depicts the eligible Shallow Flood areas;
  - (ii) The proposed amount of wetness cover for each eligible Shallow Flood area; and
  - (iii) The method for determining effectiveness of the proposed wetness cover.
- D. The Wetness Cover Plan shall be subject to approval of the APCO, which approval shall not be unreasonably withheld.

#### ACTIONS TO ADDRESS STANDARD VIOLATIONS

- 17. After May 1, 2010, the APCO will recommence written SCR determinations under the revisions to the 2003 SIP as provided in Section 28. Recommended determinations will use Dust ID data collected only after April 1, 2010, except as provided in Section 11.A.(ii) for Study Areas, and shall be made at least once in every calendar year.
- 18. If, pursuant to Section 17, the APCO determines that a monitored or modeled exceedance of the federal standard caused by emissions from the lake bed has occurred at or above the historic shoreline:
  - A. The APCO, based on all available information, including visual observation, monitoring and modeling, and in consultation with the City, will identify the need for additional controls, monitoring, or both.
  - B. (i) If the APCO identifies the need for additional controls, the APCO shall issue a SCR determination.

- (ii) If the City does not agree with the APCO's determination, the City may, within 60 days of the APCO's determination, submit to the District an Alternative Analysis. If the City submits an Alternative Analysis, the APCO shall consider the Analysis and may withdraw, modify or confirm the SCR determination.
- (iii) If the APCO issues a modified SCR determination or confirms the initial SCR determination and the City does not agree with the APCO's action, the City may initiate the Dispute Resolution Process pursuant to Section 32. The APCO may modify the SCR determination based on the Dispute Resolution process.
- (iv) In the event the Parties are unable to resolve disagreements over future SCR determinations through the Dispute Resolution Process, the City may appeal future determinations to CARB under the provisions of Health and Safety Code Section 42316 (Section 42316), provided that the Parties expressly intend that this Agreement be the final resolution regarding the existing disputes between the Parties that are the subject of this Agreement. Based on the foregoing, the City stipulates and agrees that all of the provisions and determinations, including the measures and procedures, contained in the 2003 SIP, the provisions of this Agreement to be included in modifications to the 2003 SIP pursuant to this Agreement, and the SCR determination dated April 4, 2006, which the City in good faith disputed, shall be deemed to be valid and reasonable, and that the City will not challenge those provisions or determinations by appeal under Section 42316 or in any other proceeding, including any other administrative or judicial forum. Subject to this Paragraph, the City may challenge any future SCR determination under Section 42316; however any arguments or challenges must be based on data and information that do not currently exist, but that exist after the execution of this Agreement.

C. The City shall prepare and submit for the APCO's consideration and written approval, which approval shall not be unreasonably withheld, a Remedial Action Plan as described in Section 21 to address the exceedance(s). The City shall submit the Remedial Action Plan within 60 days of the date the SCR determination becomes final.

D. The District may, as appropriate, also issue a notice of violation.

19. In the event:

A. The APCO has made a written determination pursuant to Section 18 that an exceedance of the federal standard, occurring after April 1, 2010,

resulted from a Control Area or portion of a Control Area treated with Moat and Row; and

- B. That Control Area or portion of a Control Area causing the exceedance was remediated by the City as provided in Section 21 below; and
- C. That Control Area or a portion of that Control Area is subsequently the sole cause of an exceedance of the federal standard at or above the historic shoreline, (*i.e.*, an exceedance occurred after the City attempted to remediate that area under Section 21);

then the City shall convert that Control Area, or that portion of that Control Area, from Moat and Row to MDCE-BACM or BACM, to address the exceedance described in Section 19.C., for all or the portion of that Control Area that caused the subsequent exceedance, under the time deadlines provided for in Section 24.

- 20. If the APCO determines that Moat and Row constitutes BACM or MDCE-BACM, then upon issuance of such written determination, the provisions of Section 19 that require the City to convert to BACM or MDCE-BACM may be satisfied by applying the BACM or MDCE-BACM approved under this Section 20.
- 21. A Remedial Action Plan prepared by the City pursuant to Section 18 will contain a description of:
  - A. Any and all needed changes, repairs or enhancements to DCMs, including one or some combination of the following:
    - (i) Maintenance of facilities (*e.g.*, berms, moats and rows);
    - (ii) Changes to Shallow Flood or Managed Vegetation facilities or operations (*e.g.*, increase in wetness cover extent, improved wetness cover distribution, enhancement of vegetation);
    - (iii) Augmentation (*e.g.*, more moats and rows) or enhancement (*e.g.*, addition of sand fences, surface wetting, armoring, vegetation, surface roughening) of Moat and Row areas;
    - (iv) Transition of Moat and Row areas to BACM, or MDCE-BACM.
  - B. Any and all needed expansion of DCMs, and specific plans for expanding the measures.
  - C. A schedule for the work to be performed to implement the changes, clearly indicating the point at which facilities will be operational and effective at design levels.

22. The Schedule of Contingency Measures attached to this Agreement as Exhibit 10 sets forth a non-exclusive list of items that shall be included by the City in its Remedial Action Plans, described in Section 21, and the timing required for their implementation.
23. Before any full-scale Moat and Row areas are operational, the City shall submit to the District a conceptual design and schedule for possible implementation of BACM or MDCE-BACM to each Moat and Row area consistent with Section 19. These designs and schedules are the potential contingency measures to be implemented by the City where a transition from Moat and Row to another DCM is needed, or where such transition is required pursuant to Section 19.
24. Areas to be transitioned from Moat and Row to BACM or MDCE-BACM will be operational within the times set forth in the Moat and Row Transition Schedule attached as Exhibit 11. DCMs for new areas will be operational within the times set forth in the DCM Operation Schedule attached as Exhibit 12.

#### FALL AND SPRING SHALLOW FLOOD DCM COMPLIANCE

25. For the time period from October 16 of each year through May 15 of the next year, the Shallow Flood Control Areas shall be considered to be in compliance with this Agreement and applicable laws and regulations, if the areal wetness cover within each Shallow Flood Control Area in the TDCA meets the MDCE required in Exhibit 6 using the SFCE Curve in Exhibit 7.
26. The provisions set forth in this section shall apply to all Shallow Flood areas with target control efficiencies of 99 percent or more, except those which the City and the District may mutually agree to exclude.
  - A. Beginning on April 1, 2010, compliance of TDCA Control Areas with 99 percent control efficiency Shallow Flood requirements shall be as follows:
    - (i) Beginning May 16 and through May 31 of every year, Shallow Flood may be reduced to a minimum of 70 percent areal wetness cover.
    - (ii) Beginning June 1 and through June 15 of every year, Shallow Flood may be reduced to a minimum of 65 percent areal wetness cover.
    - (iii) Beginning June 16 and through June 30 of every year, Shallow Flood may be reduced to a minimum of 60 percent areal wetness cover.

- (iv) If for any Shallow Flood area, the percent of areal wetness cover in the periods specified in Sections 26A.(i), (ii) and (iii) is below the minimum percentages specified in those sections, and there were no monitored or modeled exceedances of the federal standard at the historic shoreline, that area will be deemed to be in compliance with this Agreement and applicable laws and regulations if the City demonstrates in writing and the APCO reasonably determines in writing that maximum mainline flow was maintained in the applicable period.
  - B. From July 1 through September 30 of each year, the City is not required by the 2003 SIP to apply water for dust control, but is required to maintain minimum areal wetness cover as required by applicable environmental documents and approvals.
  - C. Beginning on April 1, 2010, if modeled or monitoring data shows an exceedance or exceedances of the federal standard at the historic shoreline as a result of excessive dry areas on Shallow Flood Control Areas during the dust control periods for each year between May 16 through June 30, and October 1 through October 15, the provisions of Sections 17 and 18 shall apply.
27. The provisions of Sections 25 and 26 are subject to the results of air quality modeling, to be conducted by the City and approved by the APCO, that demonstrates attainment of the federal standard at the historic shoreline using the reduced areal wetness covers set forth in Section 26. The modeling shall be conducted as described in the 2003 SIP using data for the period July 2002 through June 2006. The control efficiency of the areal wetness covers shall be modeled using the SFCE Curve as provided in Section 5.

#### REVISION OF THE STATE IMPLEMENTATION PLAN (SIP)

- 28. A. The APCO will propose a District Board Order that will revise the 2003 SIP to incorporate all of the terms and conditions of this Agreement, except such terms and conditions, if any, that may not lawfully be included in the SIP. The APCO will propose the Board Order and SIP revision at a time sufficient to allow the proposed revisions to be considered and adopted by the District Board by July 1, 2008. The time for consideration and adoption shall take into account, without limitation, the time for legally required environmental review and public notice and hearing. The District Board will act on the proposed SIP revisions by July 1, 2008.
- B. If the District Board has the legal ability to act and fails to act by November 1, 2008 on a proposed District Board Order as described in Subsection 28.A, the City may terminate this Agreement by providing

written notice to the District, provided, however, that the City will not provide such notice prior to the conclusion of the Dispute Resolution Process pursuant to Section 32, which process may be initiated by either Party.

- C. The Parties have developed this Agreement with the intention that its provisions will be incorporated into a revision of the 2003 SIP and are consistent with applicable provisions of the Health and Safety Code, including Section 42316, and applicable provisions of federal law regarding attainment of the NAAQS.
- D. The APCO shall confer in good faith with the City to develop procedures to modify and authorize MDCE-BACM for incorporation into the revisions to the 2003 SIP.
- E. The District will be CEQA lead agency and will prepare, in consultation with the City, and will consider for certification on or before March 1, 2008 an environmental impact report (EIR) on the proposed SIP revisions.
- F. (i) In the event:
  - (a) the District Board adopts a District Board Order revising the 2003 SIP that does not incorporate all the terms and conditions of this Agreement, except such terms and conditions, if any that may not lawfully be included in the SIP; or
  - (b) the District Board adopts a District Board Order revising the 2003 SIP that incorporates all the terms and conditions of this Agreement except such terms and conditions, if any, that may not lawfully be included in the SIP, and subsequent judicial action causes the revised SIP to be materially inconsistent or materially in conflict with the terms and conditions of this Agreement,

the City may terminate this Agreement in the case of Section 28.F(i)(a), and either Party may terminate this Agreement in the case of Section 28.F(i)(b), within 30 days of such action by providing written notice to the other Party.

- (ii) If the City does not elect to terminate this Agreement pursuant to Section 28.F(i) and any inconsistencies or conflicts exist between this Agreement that preclude compliance with both, the provisions of the District Board Order shall prevail.

- G. The City will support and will not appeal or in any other way challenge or oppose revisions to the 2003 SIP and resulting District Board Order that incorporate all of the terms and conditions of this Agreement, except such terms and conditions, if any, that may not lawfully be included in the SIP. After issuance of the District Board Order provided for in this Section, the City shall not challenge the order under CEQA to the extent that Order is consistent with this Agreement.
- H. In the event the District Board fails to certify the EIR by March 1, 2008 or to act on the proposed SIP revisions by July 1, 2008, the Parties shall meet and confer as provided in Section 33.A.
- I. Any provisions of this Agreement that are incorporated into the District Board Order as provided in Section 28.A. shall, upon adoption of that Order by the District Board, cease to have any further force and effect as part of this Agreement, and shall instead be effective as part of the District Board Order.
- J. Any provisions of this Agreement that are not incorporated into the District Board Order as provided in Section 28.A shall remain in full force and effect as part of this Agreement until May 1, 2012, at which time those provisions shall cease to be of any further force or effect as part of this Agreement, provided that the Parties may mutually agree in writing to extend this date.

#### COVER MEASUREMENT TECHNIQUES AND PERFORMANCE SPECIFICATIONS

- 29. The District and City will collaboratively develop wetness and vegetative cover measurement techniques, control efficiency relationships, and compliance specifications. Final acceptance of those cover measurement techniques and compliance specifications with regulatory impact will be at the sole discretion of the APCO.

#### KEELER DUNES

- 30. The Parties acknowledge that dust emissions from the area known as the Keeler Dunes may cause or contribute to exceedances of federal and state standards for PM<sub>10</sub>. The City hereby agrees to cooperate with the District and other federal, state and local agencies and experts as necessary to develop a plan to reduce dust emissions from the Keeler Dunes.

#### COOPERATION BETWEEN PARTIES AND DISPUTE RESOLUTION

- 31. In carrying out the terms of this Agreement, the Parties intend to cooperate fully and to consult with each other effectively and on a regular basis. The Parties will make good faith efforts to provide each other with relevant documents and

technical information in a timely manner, and they will keep each other informed of their respective progress in actions to implement the actions set forth in this Agreement, including, without limitation, progress in entering into consultant and construction contracts and in securing permits from agencies with permitting authority.

32. Notwithstanding the Parties' commitment to cooperate in implementing the terms of this Agreement, they recognize that differences may arise between them. To address this situation, the Parties agree that, in the event either Party believes that a dispute exists regarding implementation or interpretation of any provision of this Agreement, that Party may, by informing the other Party in writing within 21 days of the decision or determination, action or proposed action triggering the dispute, initiate non-binding mediation between the Parties. A party may not seek non-binding mediation for issues that were already the subject of mediation under this Section unless both Parties agree in writing.
  - A. The mediator shall be a mediator mutually acceptable to the Parties. The Parties may also by mutual agreement include in the mediation, one or more of the technical experts selected pursuant to Section 9.C.(ii), or any other technical experts, such experts to be under contract to the District and jointly managed by the Parties. The City shall be responsible for the cost of the mediator and the technical experts pursuant to Health and Safety Code Section 42316. The mediation will be conducted and completed within 60 days of the notice initiating the Dispute Resolution Process unless that time period is extended by mutual agreement of the Parties. The mediation will be conducted under all applicable California laws regarding mediation, including but not limited to Cal. Evidence Code Sections 1115-1128.
  - B. Neither Party will commence any litigation concerning the implementation of terms of this Agreement unless that Party has first initiated the mediation described in this Section, and the sooner of the following two events takes place:
    - (i) Sixty (60) days has expired from the date that Party first sent written notice to commence the mediation; or
    - (ii) Both Parties agree, or the mediator(s) states, in writing that the mediation has been completed.
    - (iii) Notwithstanding the provisions of this Section 32.B, a Party may commence litigation at an earlier time if necessary to pursue a claim or cause of action that would otherwise be time barred under an applicable statute of limitations.

- C. If the Dispute Resolution Process pursuant to this Section 32 is initiated to address a dispute regarding a SCR determination issued by the APCO pursuant to Section 18.B, then that SCR determination shall not be deemed final until the conclusion of this process under Section 32.B.
- D. Nothing in this section is intended to or shall be construed to restrict or eliminate a Party's right to utilize available legal remedies following completion of the mediation process.

EXTENSIONS OF TIME

33. A. In the event that the District

- (i) Anticipates that it will fail to certify or fails to certify an environmental impact report on the proposed SIP revisions and related actions by March 1, 2008; or
- (ii) Anticipates that it will fail to act on or fails to act on a proposed District Board Order pursuant to Section 28.A by July 1, 2008,

the District shall promptly notify the City, and Parties shall meet and confer to determine what if any revisions to other dates contained in this Agreement may be appropriate. The Parties may mutually agree to the participation of a mediator in the meet and confer process.

B. In the event the City

- (i) Anticipates that it will be unable to complete implementation or fails to complete implementation of moat and row controls pursuant to this Agreement by October 1, 2009; or
- (ii) Anticipates that it will be unable to complete implementation or fails to complete implementation of all other controls by April 1, 2010,

the City may seek relief for such failure or delay by obtaining a variance from the Hearing Board of the Great Basin Unified Air Pollution Control District pursuant to District Regulation VI and all applicable law for variance relief from a District Order, including but not limited to Health and Safety Code Section 42350 *et seq.* In such event, the District shall, at the request of the City, meet with the City, prior to or after the filing of a request for a variance, in order to ascertain whether the District will support the City's variance request. In the event the District will not support the City's variance request, the City may invoke the Dispute Resolution Process pursuant to Section 32.

- C. Nothing in this Section is intended to or shall limit the ability of the City to seek a variance from requirements not included in this Section.
  - D. Each Party will undertake to inform the other Party as early as practicable of the fact that it anticipates that it will not meet or has failed to meet any of the dates set out in this Section.
34. In the event either Party claims that the other Party is in material breach of the terms of this Agreement, including without limitation, a claim by the District that the City is in material breach under Section 11, the Party claiming the breach shall provide written notice of the claimed breach to the other Party. In the event the Party claimed to be in breach contests such claim, the issue shall be subject to the Dispute Resolution Process in Section 32.

#### LAWSUIT/APPEAL SETTLEMENT CONDITIONS

35. Within 15 days of execution of this Agreement, the APCO shall issue a revised SCR determination that incorporates the terms of this Agreement and that supersedes all previous determinations.
36. Upon issuance by the APCO of the revised SCR determination as described in Section 35, the City shall immediately commence the process for implementing additional DCMs on the Owens Lake bed consistent with the terms of this Agreement.
37. Upon issuance by the APCO of the revised SCR determination as described in Section 35, the City shall within seven days dismiss with prejudice its CARB appeals and the litigation against the District as described in the Recitals at Paragraphs L, O. and P.

#### DEFINITIONS

38. Definitions of terms used in this Agreement are contained herein and in Exhibit 13. Where specifically identified in Exhibit 13, these terms as used in this Agreement and Exhibits shall have the meanings provided in this Exhibit 13. Where no definition is provided herein or in Exhibit 13, the words and terms shall have their meaning as provided in the federal Clean Air Act or state air pollution law in the Health and Safety Code, and where no definition is found there, shall have their ordinary meaning as read in the context of this Agreement and consistent with the expressed intent of the Parties.

#### NOTICES

39. Whenever, under the terms of this Agreement, written notice is required to be given or a report or other document is required to be sent by one Party to another, it shall be sent by overnight mail and directed to the individual at the address

specified below, unless that individual or his or her successor gives notice of a change to the other Party in writing.

As to the City:

Ronald F. Deaton  
General Manager  
Los Angeles Department of Water and Power  
111 North Hope Street, Room 1550  
Los Angeles, CA 90012

As to the District:

Theodore D. Schade  
Air Pollution Control Officer  
Great Basin Unified Air Pollution Control District  
157 Short Street  
Bishop, California 93514

ADDITIONAL PROVISIONS

40. By this Agreement, the City and the District intend to settle their disputes regarding methods to address air quality issues at Owens Lake, including disagreements over the SCR determination issued on December 21, 2005, and the Modified SCR determination issued on April 4, 2006.
41. This Agreement is the final integrated agreement between the Parties regarding the matters addressed herein, and may not be modified except in a writing signed by both Parties.
42. This Agreement shall be construed in accordance with the laws of the State of California.
43. In the event any provision of this Agreement is judicially determined to be unenforceable, the Parties shall meet and confer and following such meeting, the Parties may amend the Agreement, or continue the Agreement without amendment, or either Party may terminate the Agreement.
44. This Agreement shall not create any rights in any third party.

45. No failure by a Party to insist on strict performance of any term or condition of this Agreement shall constitute a waiver of such term or condition or a breach hereof.
46. Each Party represents that their respective signatories below have the authority to bind them to the terms of this Agreement.

REVIEWED AND AGREED TO:

Dated: \_\_\_\_\_, 2006

Dated: \_\_\_\_\_, 2006

\_\_\_\_\_  
Ronald F. Deaton  
General Manager, Los Angeles Department of  
Water and Power

The City of Los Angeles  
By and Through the  
Los Angeles Department of Water and Power

\_\_\_\_\_  
Henry "Skip" Veatch  
Board Chairman

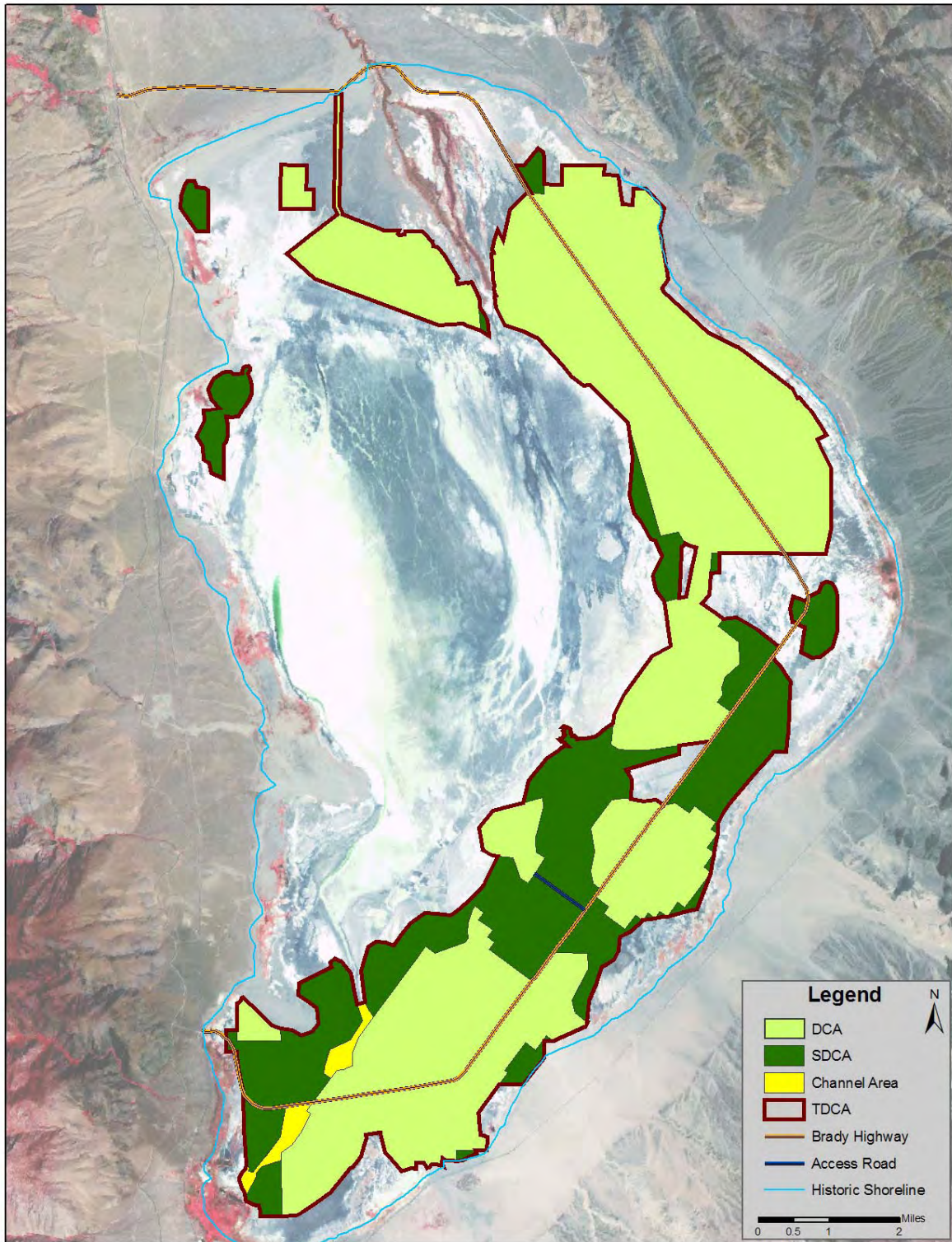
Great Basin Unified Air Pollution Control  
District

## List of Exhibits

1. Total Dust Control Area Map
2. 2006 Supplemental Dust Control Area Coordinate Description
3. Dust Control Measure Map
4. Dust Control Measures Description
5. Minimum Dust Control Efficiency Map
6. MDCE Selection Process Spreadsheet
7. Shallow Flood Control Efficiency Curve
8. Moat and Row Demonstration Project Location Map
9. Study Area Map
10. Schedule of Contingency Measures
11. Moat and Row Transition Schedule
12. DCM Operation Schedule
13. Definitions

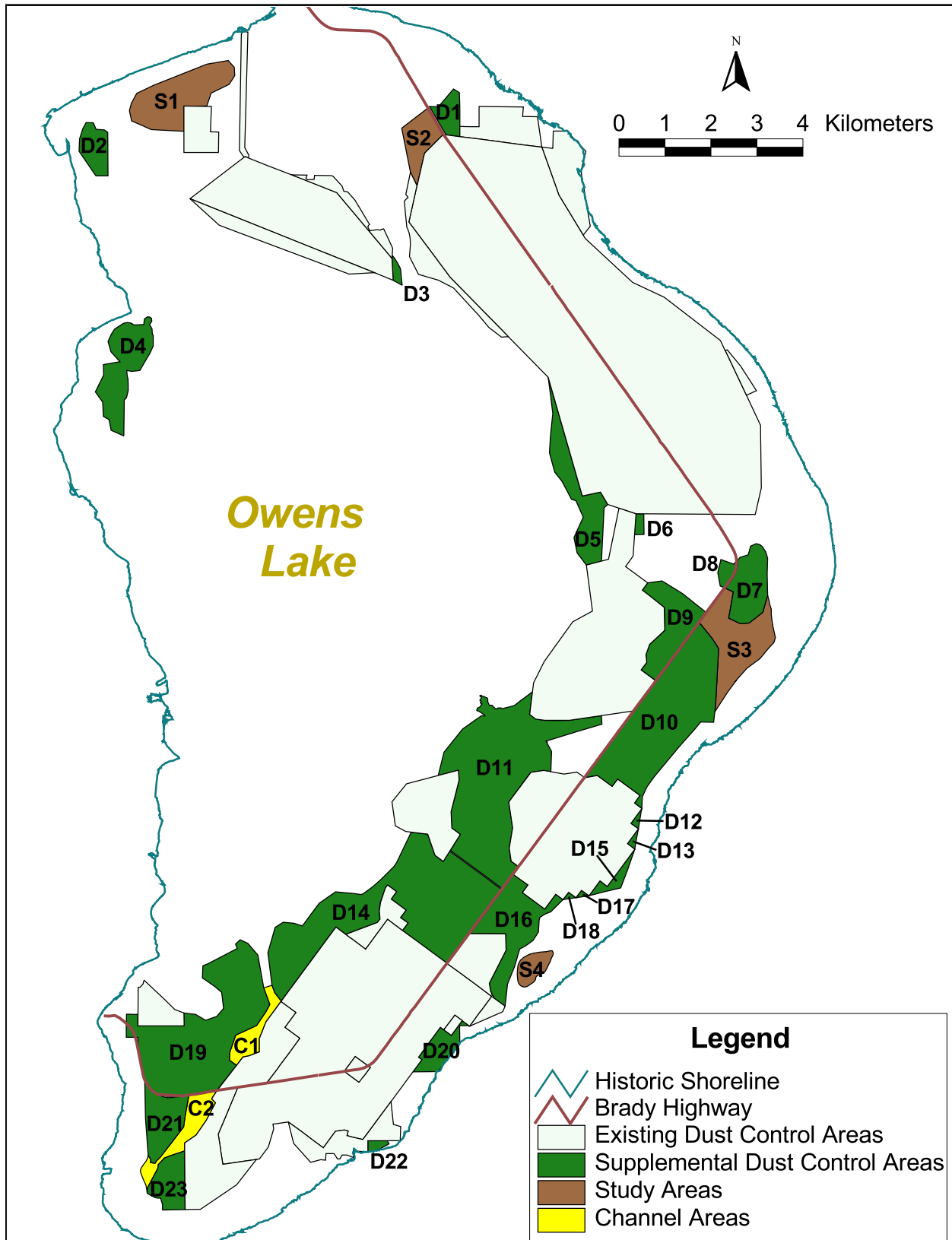
# EXHIBIT 1 -- TOTAL DUST CONTROL AREA MAP

The Total Dust Control Area (TDCA) is comprised of the 2006 Supplemental Dust Control Area (SDCA) and the 2003 Dust Control Area (DCA).



# EXHIBIT 2 -- 2006 SUPPLEMENTAL DUST CONTROL AREA COORDINATE DESCRIPTIONS

## KEY MAP



## EXHIBIT 2 -- Owens Lake 2006 Supplemental Dust Control Area Coordinate Descriptions

Area / ID	Area (miles <sup>2</sup> )	Area type	Coordinates(UTM Zone11 meters NAD83)		Area / ID	Area (miles <sup>2</sup> )	Area type	Coordinates(UTM Zone11 meters NAD83)	
			X-coordinates	Y-coordinates				X-coordinates	Y-coordinates
D1	0.16	SDCA	416,001.0310 415,701.7500 415,343.2810 415,539.4060 415,866.3750 415,994.4060 416,002.6250 416,005.6250 416,001.0310	4,042,347.3789 4,042,385.7617 4,042,999.8633 4,042,999.0234 4,043,383.8359 4,043,304.2109 4,042,981.9922 4,042,568.5234 4,042,347.3789	D5	0.57	SDCA	418754.0310 418552.9690 418484.0000 418689.0940 418529.0310 418434.8130 418325.1880 418224.7810 418067.7500 417953.1880 417980.5000 418027.9060 417924.4060 418666.3750 419065.6880 419223.4690 419141.3750 419084.1880 418754.0310	4033026.5000 4033287.6914 4033621.1133 4034066.4102 4034424.5078 4034452.0664 4034653.5234 4034845.3438 4035047.7852 4035467.4961 4035865.3203 4036319.6094 4037110.5117 4034527.9844 4034610.9648 4034342.1406 4034271.8047 4033110.8086 4033026.5000
D2	0.21	SDCA	408,085.5000 407,718.8130 407,731.5000 407,804.9060 407,873.2810 408,032.2500 408,089.5630 408,267.6560 408,347.0630 408,348.9690 408,085.5000	4,041,493.3164 4,042,027.7422 4,042,299.3945 4,042,524.2148 4,042,654.1211 4,042,647.6875 4,042,502.0625 4,042,491.4219 4,042,440.3203 4,041,492.4844 4,041,493.3164	D6	0.03	SDCA	419801.2810 419831.7500 420006.8130 420012.7190 419801.2810	4033687.7539 4034141.1016 4034139.3281 4033690.4844 4033687.7539
D3	0.03	SDCA	414,747.2500 414,550.5000 414,528.0310 414,532.5000 414,583.3750 414,643.3130 414,700.5000 414,718.6880 414,729.1250 414,747.2500	4,039,108.7500 4,039,224.6641 4,039,697.5156 4,039,759.7891 4,039,699.2617 4,039,605.6250 4,039,498.9766 4,039,441.7188 4,039,314.2500 4,039,108.7500	D7	0.43	SDCA	422105.2500 421854.9690 421952.1880 421827.1560 421778.4380 421882.0310 421931.3130 421954.3130 421966.3130 421992.7810 422013.5310 422030.0630 422039.5000 422042.1560 422042.4380 422040.7810 422103.3750 422274.9380 422331.4380 422451.9060 422530.2190 422579.0940 422659.7190 422698.6880 422688.0630 422701.7500 422592.2190 422299.6560 422105.2500	4031749.0176 4031871.4102 4032442.4199 4032498.3555 4032522.0762 4032660.6934 4032728.7031 4032765.7129 4032785.8828 4032841.0703 4032894.8164 4032956.1914 4033014.7422 4033068.7461 4033082.8008 4033127.2188 4033191.3320 4033248.8359 4033437.2383 4033492.2617 4033470.0195 4033430.6797 4033313.9453 4033173.2383 4032830.0469 4032367.5195 4031994.7988 4031762.5020 4031749.0176
D4	0.59	SDCA	408,694.5000 408,417.2190 408,370.5940 408,249.5940 408,231.6880 408,075.5000 408,254.4060 408,249.9060 408,606.5630 408,414.0000 408,348.8750 408,415.9060 408,494.0000 408,687.9380 408,762.7190 408,853.0940 408,911.3130 409,028.9380 409,126.1560 409,134.0630 409,144.5940 409,201.0630 409,255.5940 409,299.1250 409,304.7190 409,254.9380 409,308.0940 409,312.7190 409,335.7190 409,334.3750 409,260.5630 409,184.9060 409,044.0630 408,869.9060 408,755.8130 408,768.2810 408,784.9690 408,789.7190 408,751.4060 408,706.5940 408,694.5000	4,035,836.9883 4,035,957.7344 4,036,191.9453 4,036,258.3164 4,036,571.0625 4,036,791.1719 4,037,157.2813 4,037,387.3789 4,037,448.5391 4,037,664.3359 4,037,888.7227 4,038,042.2422 4,038,156.0977 4,038,284.6484 4,038,303.7813 4,038,290.2422 4,038,246.2109 4,038,251.5742 4,038,258.7344 4,038,309.6602 4,038,382.5547 4,038,424.0508 4,038,422.9180 4,038,391.3789 4,038,329.9609 4,038,259.1797 4,038,163.0195 4,038,061.7695 4,038,017.0195 4,037,792.3008 4,037,628.4492 4,037,508.1055 4,037,256.8359 4,037,236.6055 4,037,260.8867 4,037,143.0156 4,037,079.6914 4,036,817.3555 4,036,667.7344 4,036,616.2422 4,035,836.9883	D8	0.06	SDCA	421758.4690 421668.6250 421615.5310 421680.6250 421959.5000 422021.5000 422022.5630 422019.3130 422010.1880 421994.8130 421977.7500 421948.4060 421918.7190 421884.3440 421806.2810 421758.4690	4032529.3477 4032569.9238 4032859.4297 4033146.5156 4033044.5586 4033108.1875 4033079.4023 4033018.7031 4032960.1484 4032902.9766 4032858.2227 4032795.7422 4032746.2988 4032697.7148 4032593.7305 4032529.3477

## EXHIBIT 2 -- Owens Lake 2006 Supplemental Dust Control Area Coordinate Descriptions

Area / ID	Area (miles <sup>2</sup> )	Area type	Coordinates(UTM Zone11 meters NAD83)		Area / ID	Area (miles <sup>2</sup> )	Area type	Coordinates(UTM Zone11 meters NAD83)	
			X-coordinates	Y-coordinates				X-coordinates	Y-coordinates
D9	0.53	SDCA	420,265.8440	4,030,508.7188	D11 continued	2.32	SDCA	416481.0000	4029994.3359
			419,947.7500	4,030,741.5176				416483.2500	4030000.4590
			420,067.1880	4,030,907.7324				416476.4690	4030004.0684
			420,051.5940	4,031,073.7461				416464.6250	4030013.5332
			420,132.5000	4,031,300.5000				416452.1250	4030020.7266
			420,460.9690	4,031,604.7441				416447.3130	4030031.0762
			420,449.4060	4,032,103.9551				416454.8750	4030042.8809
			419,975.9690	4,032,480.4902				416467.7500	4030052.9766
			420,091.3750	4,032,635.9316				416466.0630	4030067.6035
			420,399.6560	4,032,679.1270				416454.5310	4030077.5586
			420,847.1880	4,032,406.2988				416440.6250	4030076.0938
			421,363.7810	4,031,994.1230				416437.6250	4030084.6914
			420,995.8750	4,031,495.0273				416445.8130	4030098.3496
			420,265.8440	4,030,508.7188				416459.0310	4030110.6875
								416465.9060	4030126.0488
D10	1.75	SDCA	419,965.0000	4,027,728.2520	416467.1560	4030142.7871			
			419,803.2190	4,027,847.7363	416461.5310	4030157.1523			
			419,922.8440	4,028,009.4902	416450.1560	4030168.0938			
			419,437.5940	4,028,368.0176	416439.0940	4030177.2402			
			419,317.9690	4,028,206.2617	416443.8750	4030188.7227			
			418,994.5310	4,028,445.2656	416458.4380	4030192.3809			
			418,730.3440	4,028,397.0371	416470.3130	4030190.8789			
			419,406.8750	4,029,323.4316	416479.0310	4030177.9727			
			421,010.9060	4,031,484.3145	416493.8130	4030171.2637			
			421,216.1560	4,031,761.8594	416510.6250	4030166.2656			
			421,439.0940	4,031,498.2363	416527.2190	4030165.8828			
			421,631.0310	4,031,208.7773	416541.7810	4030161.9238			
			421,571.8750	4,030,077.3184	416568.0630	4030143.3945			
			421,548.9690	4,029,833.7383	416585.0000	4030137.3281			
			421,523.2500	4,029,607.1328	416601.6250	4030130.7734			
			421,241.1880	4,029,607.8887	416608.7190	4030112.7188			
			421,116.0000	4,029,457.7559	416614.8750	4030093.7324			
			420,776.0000	4,029,075.9551	416614.1560	4030081.1367			
			420,233.7500	4,028,421.8027	416606.9690	4030057.0176			
			420,070.9690	4,028,193.2832	416610.2810	4030041.6328			
			419,973.2500	4,027,978.3457	416621.0310	4030029.7910			
419,965.0000	4,027,728.2520	416626.8440	4030016.4492						
		416634.6560	4030003.4863						
D11	2.32	SDCA	416,924.2190	4,025,991.8965	416639.6560	4029988.0273			
			416,906.7190	4,026,000.2598	416642.2500	4029973.2676			
			416,817.3750	4,026,065.2832	416656.7190	4029972.4727			
			415,808.9380	4,026,810.0977	416688.3750	4029977.5293			
			415,803.8440	4,026,822.5840	416704.9380	4029976.5762			
			415,810.1250	4,026,837.9219	416715.9690	4029964.5742			
			416,016.5310	4,027,163.7559	416723.1250	4029949.7949			
			415,829.9690	4,027,301.7383	416734.4690	4029937.7109			
			415,812.0000	4,027,654.7500	416747.7190	4029929.2070			
			415,987.3440	4,028,348.8008	416759.0310	4029916.4004			
			415,969.6880	4,028,562.7461	416768.4690	4029902.2207			
			415,530.3750	4,028,446.4922	416781.8130	4029898.3633			
			415,660.2500	4,028,955.4551	416790.3750	4029900.3945			
			416,062.8130	4,029,458.0664	416827.0940	4029907.2129			
			416,386.1560	4,029,683.9746	416838.2500	4029915.7813			
			416,436.9060	4,029,720.7148	416845.7500	4029917.9492			
			416,449.5000	4,029,732.7207	416852.5940	4029916.0938			
			416,468.5940	4,029,742.7246	416867.9690	4029916.1543			
			416,489.8750	4,029,746.4355	416880.3440	4029917.7637			
			416,529.4060	4,029,741.9941	416895.6880	4029914.7402			
			416,547.9690	4,029,741.4180	416925.9380	4029904.3965			
			416,541.4060	4,029,755.8789	416940.7190	4029903.4805			
			416,528.0940	4,029,767.9277	416954.8130	4029907.8730			
			416,515.2190	4,029,777.7969	416966.3750	4029914.2246			
			416,501.9690	4,029,786.2637	417119.3130	4029946.7070			
			416,489.6560	4,029,794.9004	417187.6250	4029971.9180			
			416,430.1250	4,029,834.6543	417582.2500	4030268.0078			
			416,415.3750	4,029,843.4570	417521.0310	4029772.5176			
			416,400.7190	4,029,849.4766	417701.5630	4029667.0430			
			416,387.3130	4,029,856.1563	417771.4380	4029656.0293			
			416,372.5940	4,029,860.3105	417852.7810	4029647.5566			
			416,368.5310	4,029,870.0703	418130.3750	4029643.4648			
			416,375.7810	4,029,880.6270	418383.2810	4029647.0859			
			416,384.4690	4,029,895.7617	419083.7810	4029748.1953			
			416,385.5310	4,029,910.9023	419086.1880	4029746.9258			
			416,395.3130	4,029,918.6621	419093.6560	4029564.0527			
			416,406.0630	4,029,922.9727	417887.0630	4029198.4668			
			416,419.9060	4,029,929.8086	417896.1560	4029182.4668			
			416,435.1560	4,029,936.6543	417881.5000	4029187.7246			
			416,449.2500	4,029,947.3340	418000.2190	4028968.8594			
			416,459.1250	4,029,961.2246	417985.8130	4028531.7539			
416,462.9690	4,029,976.8418	417825.0940	4028556.4668						
416,471.5630	4,029,988.3965	417545.0000	4028513.0254						

## EXHIBIT 2 -- Owens Lake 2006 Supplemental Dust Control Area Coordinate Descriptions

Area / ID	Area (miles <sup>2</sup> )	Area type	Coordinates(UTM Zone11 meters NAD83)		Area / ID	Area (miles <sup>2</sup> )	Area type	Coordinates(UTM Zone11 meters NAD83)	
			X-coordinates	Y-coordinates				X-coordinates	Y-coordinates
D11 continued	2.32	SDCA	417,068.6250	4,027,867.9766	D16	0.70	SDCA	416987.0630	4023427.0801
			417,152.6880	4,027,307.1758				416718.5630	4023625.5098
			417,077.1880	4,026,864.2910				416734.5310	4023647.0078
			417,117.7810	4,026,581.1016				416700.3440	4023672.5195
			417,277.7500	4,026,460.9707				416689.5630	4023734.1953
			416,924.2190	4,025,991.8965				416678.1560	4023741.8613
D12	0.02	SDCA	419,887.8440	4,027,285.2500				416644.1560	4023925.0195
			419,726.0310	4,027,404.7344				417010.6880	4024645.2734
			419,965.0000	4,027,728.2520				417000.8130	4024984.0566
			419,949.5310	4,027,659.1582				417004.5630	4024995.9414
			419,887.8440	4,027,285.2500				416997.8130	4025001.7578
								416224.2500	4025007.0430
D13	0.02	SDCA	419,810.5000	4,026,842.2539				416932.7810	4025971.6777
			419,648.7190	4,026,961.7383				417170.5000	4026294.0039
			419,772.4690	4,027,130.8359				417483.0940	4026061.2461
			419,887.8440	4,027,285.2500				417363.6250	4025899.4863
			419,880.3750	4,027,234.3164				417848.8440	4025541.0000
			419,832.8130	4,026,984.5820				418087.8130	4025864.5176
D14	2.46	SDCA	419,810.5000	4,026,842.2539				418249.6250	4025744.9961
			412,117.6560	4,023,538.0977				417981.1560	4025483.1621
			411,983.4060	4,023,714.6152				417862.3130	4025432.8262
			411,915.1560	4,023,883.7793				417742.6560	4025357.7832
			411,828.0940	4,024,594.2207				417731.0940	4025299.8848
			411,988.0310	4,025,141.2695				417711.4060	4025042.9023
D17	0.01	SDCA	412,161.8440	4,025,254.5859				417596.9060	4024857.0391
			412,387.4060	4,025,234.3184				417427.9690	4024735.2051
			412,577.3130	4,025,175.8184				417308.1560	4024673.9160
			412,752.9380	4,025,413.6777				417192.2500	4024288.4082
			412,942.5940	4,025,667.2090				417038.6560	4023907.3789
			413,298.0630	4,025,913.1816				416987.0630	4023427.0801
D18	0.01	SDCA	413,700.7190	4,025,878.1113				418812.6560	4025829.9941
			413,843.4060	4,025,859.0313				418722.7810	4025817.3457
			413,892.3750	4,025,869.0625				418531.3750	4025787.7188
			414,103.4380	4,026,021.7207				418650.8440	4025949.5527
			414,294.0310	4,026,188.3672				418812.6560	4025829.9941
			414,574.5630	4,026,473.5742					
D19	1.88	SDCA	414,628.3130	4,026,552.7695				418250.0940	4025745.5586
			414,946.8130	4,027,212.3789				418369.5630	4025907.3164
			415,303.7810	4,027,171.2480				418531.2190	4025787.8750
			415,463.6880	4,026,711.0117				418422.7500	4025775.2305
			415,639.0630	4,026,577.9492				418250.0940	4025745.5586
			415,777.6250	4,026,784.4590					
D15	0.08	SDCA	415,787.8440	4,026,793.4668				410989.2810	4022251.9551
			415,793.6560	4,026,794.4512				411145.7810	4022140.5918
			416,290.3440	4,026,429.5527				410728.5630	4021605.7773
			416,545.3750	4,026,241.2695				410525.7190	4021575.8516
			416,908.5000	4,025,969.6309				410434.2500	4021553.4805
			416,207.2500	4,025,017.7598				410330.1560	4021538.0020
D15	0.08	SDCA	415,765.2810	4,024,422.9277				410249.0940	4021523.9121
			415,712.3440	4,024,368.7461				410165.6880	4021513.8320
			414,755.6880	4,025,075.7559				410012.7810	4021489.0801
			414,875.1560	4,025,237.5156				409988.7810	4021485.5020
			414,715.5000	4,025,356.9941				409958.9380	4021487.3027
			414,832.8440	4,025,518.7598				409834.5940	4021472.0918
D15	0.08	SDCA	414,509.4060	4,025,757.7637				409710.8750	4021458.8867
			414,628.8750	4,025,919.4863				409588.2190	4021468.2129
			414,432.8750	4,026,064.2539				409472.9060	4021506.2676
			414,383.9380	4,025,997.9883				409364.2190	4021564.2617
			414,274.7500	4,025,678.2109				409273.0310	4021648.9043
			414,249.7810	4,025,496.0098				409231.3750	4021698.0781
D15	0.08	SDCA	414,266.4690	4,025,323.2305				409192.6560	4021749.2871
			414,210.4380	4,025,245.9863				409142.4380	4021863.0625
			413,519.9380	4,024,988.5723				409121.8750	4021936.3730
			413,307.2500	4,025,145.7637				409108.8130	4021989.7910
			413,144.4690	4,024,931.4102				409094.0000	4022070.1055
			412,117.6560	4,023,538.0977				409085.6880	4022117.5977
D15	0.08	SDCA	418,812.6560	4,025,829.9941				409078.5310	4022146.7773
			419,051.1560	4,026,152.9863				409061.1250	4022247.9473
			419,213.4060	4,026,034.2168				409045.9690	4022310.3633
			419,810.5000	4,026,842.2539				409033.1250	4022381.5703
			419,655.1250	4,026,404.8789				409029.3750	4022398.8301
			419,499.9380	4,025,999.3496				409009.4380	4022518.7207
D15	0.08	SDCA	419,182.9690	4,025,925.2813				409000.8440	4022749.8164
			418,812.6560	4,025,829.9941				408748.8130	4022752.2285
								408748.6880	4022994.9199
								408752.0000	4023250.6855
								409002.0630	4023249.9121
								408999.6250	4023000.2637
D15	0.08	SDCA						410005.0940	4022997.9844
								410001.1880	4023280.3379
								410254.3750	4023245.9746

## EXHIBIT 2 -- Owens Lake 2006 Supplemental Dust Control Area Coordinate Descriptions

Area / ID	Area (miles <sup>2</sup> )	Area type	Coordinates(UTM Zone11 meters NAD83)		Area / ID	Area (miles <sup>2</sup> )	Area type	Coordinates(UTM Zone11 meters NAD83)				
			X-coordinates	Y-coordinates				X-coordinates	Y-coordinates			
D19 continued	1.88	SDCA	410,472.1880	4,023,123.1172	S1	0.71	Study	410001.6560	4042464.2656			
			410,718.0630	4,023,206.8965				409290.7190	4042500.2383			
			410,862.1250	4,023,378.8164				408861.2190	4042688.4688			
			410,821.5940	4,023,731.0039				408813.8750	4042910.9609			
			410,665.3750	4,023,862.7910				408859.4380	4043071.8984			
			410,401.5000	4,024,041.8867				408972.0940	4043285.6914			
			410,411.4380	4,024,308.5215				409337.5310	4043461.0000			
			410,520.6560	4,024,349.3066				410500.6560	4043924.3945			
			411,162.2810	4,024,681.8047				410962.4690	4044000.3555			
			411,124.9690	4,024,778.6250				411096.8440	4043852.2109			
			411,222.3440	4,024,873.7930				411108.0630	4043672.6836			
			411,392.4060	4,024,792.1602				410984.4380	4043481.0273			
			411,607.8130	4,024,539.2461				410592.0940	4043294.9219			
			411,737.1560	4,023,825.0313				410496.6250	4043013.0352			
			411,867.2500	4,023,463.2520				410003.5310	4043008.3594			
			411,784.7500	4,023,306.3613				410001.6560	4042464.2656			
			411,582.4060	4,023,006.9551								
			411,126.7810	4,022,795.5957				S2	0.27	Study	415072.8130	4041278.8984
			410,994.2500	4,022,416.6367							414928.6560	4041572.7422
			D20	0.21				SDCA	414,982.2190	4,021,997.8164	414740.2500	4042529.6992
415,176.7190	4,022,263.2852	415304.2190			4042966.9609							
415,103.2190	4,022,320.4727	415642.3130			4042393.3203							
415,581.2500	4,022,965.4922	415234.1250			4041986.6914							
415,817.9380	4,022,790.5078	415072.8130			4041278.8984							
416,056.9060	4,023,113.9902	S3			0.72	Study	421548.9690		4029833.7383			
416,207.6250	4,023,003.7656						421571.8750		4030077.3184			
415,998.3750	4,023,002.3203						421631.0310		4031208.7773			
416,002.5310	4,022,602.1270						421439.0940		4031498.2363			
415,526.5000	4,022,002.0215						421216.1560		4031761.8594			
414,982.2190	4,021,997.8164						421260.3750		4031837.4414			
							421371.5310		4031985.9238			
							421398.8440		4032023.9863			
							421454.5000		4032099.1406			
							421509.5310		4032174.3066			
							421645.9690		4032358.6465			
			421725.3130	4032466.9844								
			421769.8440	4032526.2539								
			421827.1560	4032498.3555								
			421952.1880	4032442.4199								
			421854.9690	4031871.4102								
		422105.2500	4031749.0176									
		422299.6560	4031762.5020									
		422592.2190	4031994.7988									
		422701.7500	4032367.5195									
		422732.5630	4032243.8984									
		422746.8130	4032159.0254									
		422779.7500	4032064.7734									
		422779.7190	4031946.8984									
		422793.9060	4031814.8984									
		422817.5310	4031682.9316									
		422840.9690	4031565.0645									
		422869.3130	4031447.2109									
		422836.2810	4031338.7852									
		422713.7500	4031206.8086									
		422529.9380	4030985.2422									
		422250.5940	4030779.7578									
		422000.0310	4030499.9922									
		422006.2810	4030500.0156									
		421836.9380	4030271.0234									
		421548.9690	4029833.7383									
D22	0.03	SDCA	414,001.2500	4,020,257.5078	S4	0.15	Study	417410.5630	4023845.5176			
			414,001.4690	4,020,502.5137				417398.8440	4023845.8750			
			414,426.0000	4,020,500.8262				417387.4380	4023846.9883			
			414,464.0310	4,020,432.0313				417377.4060	4023848.7207			
			414,293.7190	4,020,338.7207				417367.8440	4023851.0527			
			414,135.9690	4,020,279.6660				417358.9380	4023853.9434			
			414,001.2500	4,020,257.5078				417350.9380	4023857.4238			
								417343.0940	4023861.6250			
D23	0.29	SDCA	409,535.8130	4,018,994.6445	417335.2810	4023866.7793						
			409,534.9380	4,019,112.7676	417327.4690	4023872.8066						
			409,493.8750	4,019,250.0898	417319.6880	4023879.7500						
			409,428.5630	4,019,253.1973	417310.5940	4023888.9688						
			409,374.7500	4,019,259.9512	417301.9690	4023899.1680						
			409,200.4380	4,019,355.6914	417293.6560	4023910.1230						
			409,208.0310	4,019,472.8008	417286.2810	4023921.5137						
			409,435.7810	4,019,902.2852	417281.1250	4023930.3848						
			409,445.4060	4,019,983.3887	417276.9060	4023939.6543						
			409,576.6880	4,020,126.1250	417273.1560	4023949.9414						
			410,016.9060	4,020,278.1445	417269.7190	4023961.3281						
			410,025.1560	4,019,002.0527	417266.5000	4023975.5664						
			409,535.8130	4,018,994.6445	417263.6560	4023992.3125						

## EXHIBIT 2 -- Owens Lake 2006 Supplemental Dust Control Area Coordinate Descriptions

Area / ID	Area (miles <sup>2</sup> )	Area type	Coordinates(UTM Zone11 meters NAD83)		Area / ID	Area (miles <sup>2</sup> )	Area type	Coordinates(UTM Zone11 meters NAD83)				
			X-coordinates	Y-coordinates				X-coordinates	Y-coordinates			
S4 continued	0.15	Study	417,257.5630	4,024,036.4043	S4 continued	0.15	Study	417723.6250	4024112.4082			
			417,255.7810	4,024,053.0898				417716.8440	4024108.7773			
			417,254.3440	4,024,071.4844				417710.6880	4024104.8281			
			417,253.3440	4,024,112.0410				417693.1880	4024092.0859			
			417,253.6880	4,024,135.3887				417683.1250	4024084.1797			
			417,256.4690	4,024,211.2207				417674.4380	4024076.5137			
			417,258.9380	4,024,248.6602				417667.2810	4024069.1191			
			417,260.8130	4,024,266.7930				417661.4690	4024061.8086			
			417,266.0630	4,024,299.1426				417657.0630	4024054.5488			
			417,269.5630	4,024,313.8516				417654.5000	4024048.2773			
			417,274.6560	4,024,330.5859				417652.5000	4024040.8516			
			417,281.5940	4,024,349.5684				417647.9060	4024009.5918			
			417,289.7810	4,024,368.9414				417646.3750	4024002.8047			
			417,298.0630	4,024,386.4863				417644.5940	4023996.9746			
			417,306.2810	4,024,401.4785				417640.7500	4023988.9395			
			417,314.9690	4,024,415.0508				417636.0310	4023980.8086			
			417,324.0630	4,024,427.2441				417630.3750	4023972.9629			
			417,333.2500	4,024,437.8730				417623.6560	4023965.2930			
			417,341.8130	4,024,446.3809				417617.2810	4023958.7949			
			417,362.2810	4,024,463.6328				417609.9690	4023952.3184			
			417,374.6880	4,024,472.7871				417601.7810	4023945.7832			
			417,391.6880	4,024,484.4727				417592.6250	4023939.0781			
			417,422.5940	4,024,504.8984				417575.3440	4023927.6641			
			417,438.9380	4,024,515.1504				417540.5940	4023906.3262			
			417,454.8440	4,024,524.5742				417526.8440	4023897.4316			
			417,469.5000	4,024,532.6895				417515.0940	4023889.3320			
			417,483.8130	4,024,540.1250				417487.6880	4023868.7949			
			417,497.9690	4,024,546.9180				417472.0940	4023858.9844			
			417,525.0310	4,024,558.3184				417463.6560	4023854.8926			
			417,537.3130	4,024,562.7500				417455.1880	4023851.9063			
			417,550.9690	4,024,567.0371				417444.7810	4023849.1504			
			417,565.6880	4,024,571.1504				417433.6250	4023847.1348			
			417,595.7190	4,024,578.3379				417422.1560	4023845.9258			
			417,644.3750	4,024,588.4512				417410.5630	4023845.5176			
			417,671.1560	4,024,593.2676								
			417,699.5630	4,024,597.4395				C1	0.21	Channel	411145.9380	4022140.5117
			417,729.9690	4,024,601.0371							410989.3130	4022252.0020
			417,763.4060	4,024,604.2285							410994.2500	4022416.6367
			417,801.4380	4,024,607.2109							411126.7810	4022795.5957
			417,876.5000	4,024,612.3184							411582.4060	4023006.9551
			417,885.9690	4,024,613.4160							411784.7500	4023306.3613
			417,906.1880	4,024,617.6074							411867.2500	4023463.2520
			417,954.9060	4,024,630.4629							411737.1560	4023825.0313
			417,966.3750	4,024,632.8535							411915.1560	4023883.7793
			417,976.4690	4,024,634.2813							411983.4060	4023714.6152
			417,984.4060	4,024,634.8398							412117.6560	4023538.0977
			417,991.7190	4,024,634.7266							411792.0630	4023094.1152
			417,998.0940	4,024,633.9082							411782.4060	4023076.2949
			418,004.0310	4,024,632.4531							411748.7190	4022994.3965
418,009.1560	4,024,630.2891				411643.6250	4022726.7266						
418,013.8130	4,024,627.4102				411641.6880	4022435.3887						
418,017.8750	4,024,623.8594				411419.2190	4022347.2383						
418,021.4380	4,024,619.5566				411284.5000	4022318.9453						
418,027.1560	4,024,609.7598				411145.9380	4022140.5117						
418,032.4060	4,024,597.6895											
418,034.6560	4,024,589.4512	C2	0.30	Channel	409201.5000	4019370.5664						
418,035.8750	4,024,580.7773				409173.3130	4019532.8418						
418,035.6560	4,024,570.7617				409115.7190	4019657.4395						
418,034.0630	4,024,559.9766				409058.5940	4019813.5703						
418,031.0630	4,024,548.3418				409055.4380	4019859.0117						
418,026.3750	4,024,535.4473				409098.6560	4019944.7520						
418,020.4690	4,024,521.3984				409192.5940	4020079.2344						
418,000.5310	4,024,478.6465				409223.5310	4020182.5996						
417,984.5630	4,024,435.9668				409280.3750	4020086.8984						
417,970.9060	4,024,402.7227				409276.4690	4020023.0879						
417,957.8130	4,024,373.8125				409352.7190	4020011.6758						
417,943.3130	4,024,343.8242				409373.6560	4020006.3652						
417,931.2500	4,024,320.3027				409409.3130	4020065.3262						
417,918.0940	4,024,295.7734				409487.8750	4020143.3594						
417,880.1250	4,024,228.6719				409998.1880	4020801.4746						
417,859.5000	4,024,190.0117				410027.7500	4021036.2715						
417,854.1250	4,024,181.0176				410109.2810	4021484.2578						
417,848.9380	4,024,173.2773				410174.2810	4021494.7188						
417,843.6250	4,024,166.4160				410242.0940	4021502.6836						
417,838.3130	4,024,160.3535				410335.4060	4021518.5000						
417,832.0940	4,024,154.4258				410438.7190	4021533.8438						
417,825.1250	4,024,149.1992				410529.8750	4021556.1816						
417,816.9690	4,024,144.4160				410712.0940	4021583.1074						
417,807.5630	4,024,140.0762				410602.7500	4021411.3418						
417,799.1250	4,024,136.8242				410686.8440	4021328.9805						
417,789.4690	4,024,133.5957				410488.7190	4020946.7344						
417,744.3750	4,024,120.6641				410264.6250	4020620.0820						
417,733.3130	4,024,116.6641				410015.6880	4020454.4912						

## EXHIBIT 2 -- Owens Lake 2006 Supplemental Dust Control Area Coordinate Descriptions

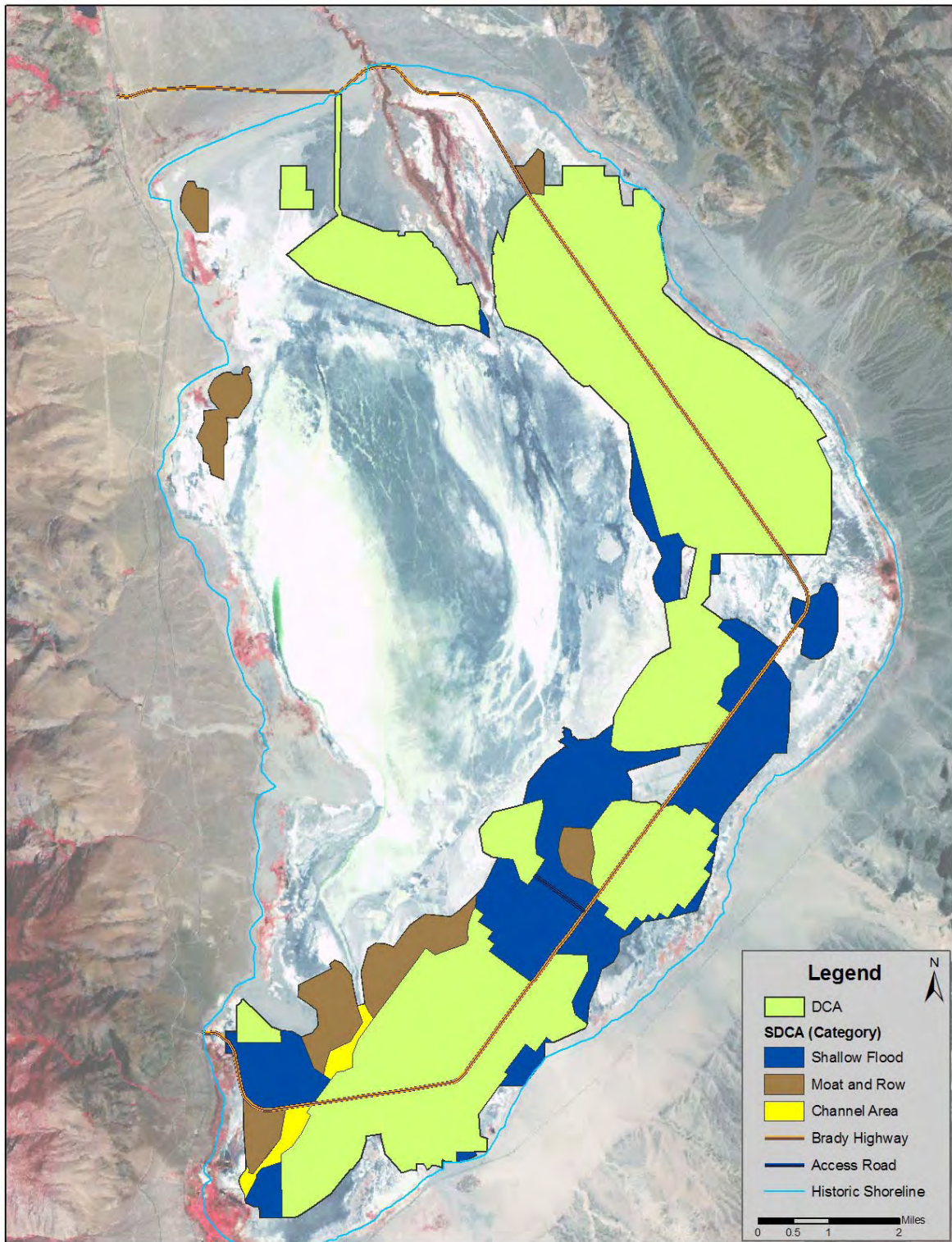
Area / ID	Area (miles <sup>2</sup> )	Area type	Coordinates(UTM Zone11 meters NAD83)	
			X-coordinates	Y-coordinates
C2 continued	0.30	Channel	410,016.9060	4,020,278.1445
			409,576.6880	4,020,126.1250
			409,445.4060	4,019,983.3887
			409,435.7810	4,019,902.2852
			409,208.0310	4,019,472.8008
			409,201.5000	4,019,370.5664

Area / ID	Area (miles <sup>2</sup> )	Area type	Coordinates(UTM Zone11 meters NAD83)	
			X-coordinates	Y-coordinates

Total SDCA            12.77  
 Total Study            1.85  
 Total Channel         0.50

# EXHIBIT 3 -- DUST CONTROL MEASURE MAP

*Shown are dust control measures assigned to areas within the SDCA.*



## **EXHIBIT 4 -- DUST CONTROL MEASURE DESCRIPTIONS**

Brief descriptions of dust control measures for use on Owens Lake are given below. More detailed descriptions of the three BACM approved dust control methods (shallow flooding, managed vegetation and gravel) are provided in the 2003 SIP. Modifications to these measures as provided in the Settlement Agreement (Agreement) are noted. All references are to sections of the Agreement; section numbers of the Agreement are contained in square brackets.

### **Shallow Flooding**

The “shallow flooding” (SF) dust control measure involves wetting emissive lake bed surfaces to reduce dust emissions. Performance specifications and a detailed description of the SF measure are provided in the 2003 SIP for achieving 99 percent PM<sub>10</sub> control efficiency. Otherwise, water shall be applied in amounts sufficient to achieve the required wetness cover as specified in Sections 3 through 5, 25, 26, and 27, or as modified under the provisions of Sections 5, 14, 15, 18, and 29. Satellite imagery, aerial photography or other methods approved by the APCO under the provisions of Section 29 are used to measure wetness cover for compliance.

### **Managed Vegetation**

The “managed vegetation” (MV) dust control measure involves establishing a plant cover on emissive lake bed surfaces to protect them from the wind, thereby reducing dust emissions. Performance specifications and a detailed description of the MV control measure are provided in the 2003 SIP for achieving 99 percent PM<sub>10</sub> control efficiency. Vegetative cover on the MV site present on the lake bed on January 1, 2007 shall be as specified in Section 6. The performance specification of MV may be modified under the provisions of Section 29. Point-frame measurements satellite imagery or other methods approved by the APCO under the provisions of Section 29 are used to measure plant cover for compliance.

### **Gravel Cover**

The “gravel cover” (GC) dust control measure involves placing a layer of gravel on emissive lake bed surfaces to protect them from the wind, thereby reducing dust emissions. Performance specifications are described in the 2003 SIP.

### **Moat and Row**

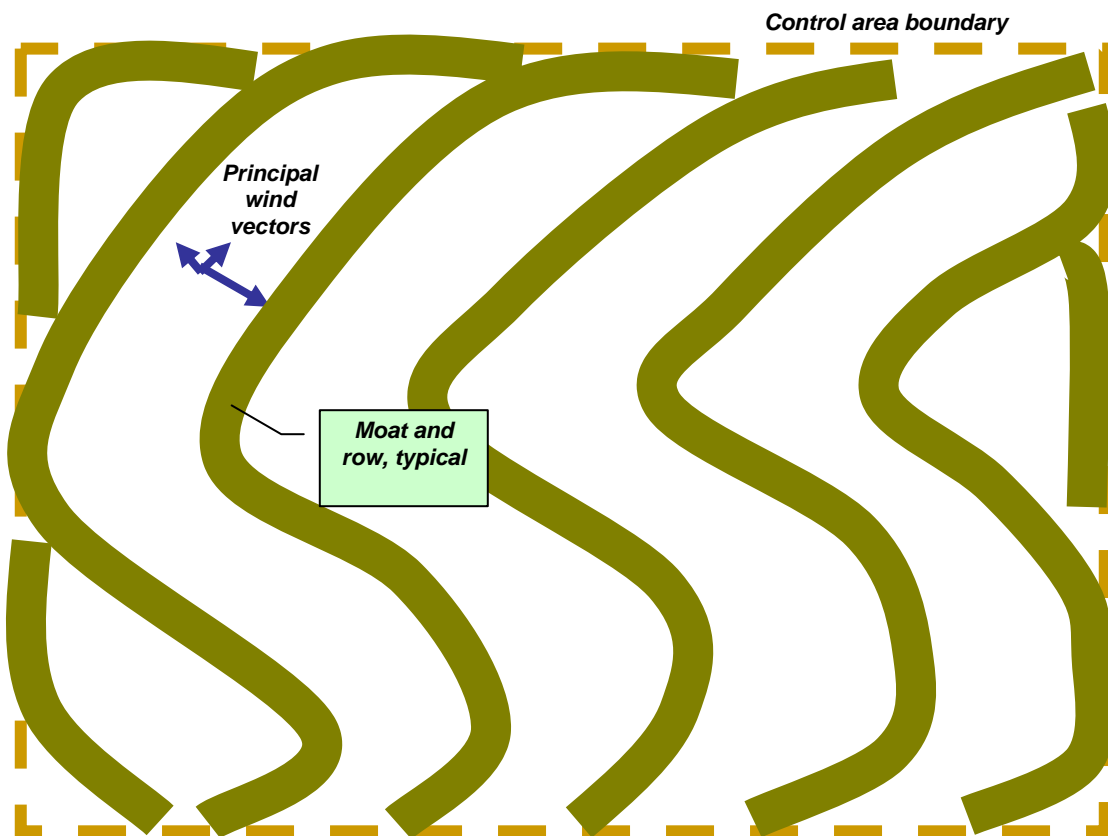
The general form of the “moat and row” (MR) measure is an array (see Figure E4-1) of earthen berms (rows) about 5 feet high with sloping sides, flanked on either side by ditches (moats) about 4 feet deep (see Figure E4-2). Moats serve to capture moving soil particles, and rows physically shelter the downwind lake bed from the wind. The individual MR elements are constructed in a serpentine layout across the lake bed surface, generally parallel to one another, and spaced at variable intervals, so as to minimize the fetch between rows along the predominant wind directions. The serpentine layout of the MR array is intended to control emissions under the full range of principal wind directions (see Figure E4-1). Initial pre-test

modeling indicates that MR elements' spacing will generally vary from 250 to 1000 feet, depending on the surface soil type and the PM<sub>10</sub> control effectiveness required on the MR area.

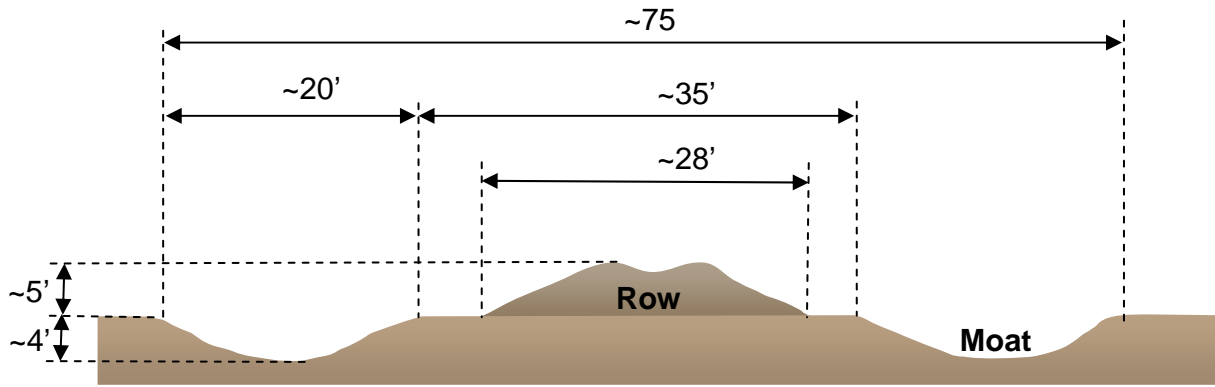
The PM<sub>10</sub> control effectiveness of MR may be enhanced by combining it with other dust control methods such as vegetation, water, gravel, sand fences, or the addition of other features that enhance sand capture and sheltering or directly protect the lake bed surface from wind erosion. The effectiveness of the array can also be increased by adding moats and rows to the array, which reduces the distance between rows.

The final form of MR will largely be determined from the results of testing on the lake bed as provided in Sections 7 and 8. Final design is subject to test results, required PM<sub>10</sub> control effectiveness, environmental documentation and permitting, engineering, and monitoring considerations.

In areas where MR is used as a control measure, the City shall implement the measure in a manner consistent with the Agreement, particularly Sections 7 and 8, or as modified by actions pursuant to Sections 18 through 24.



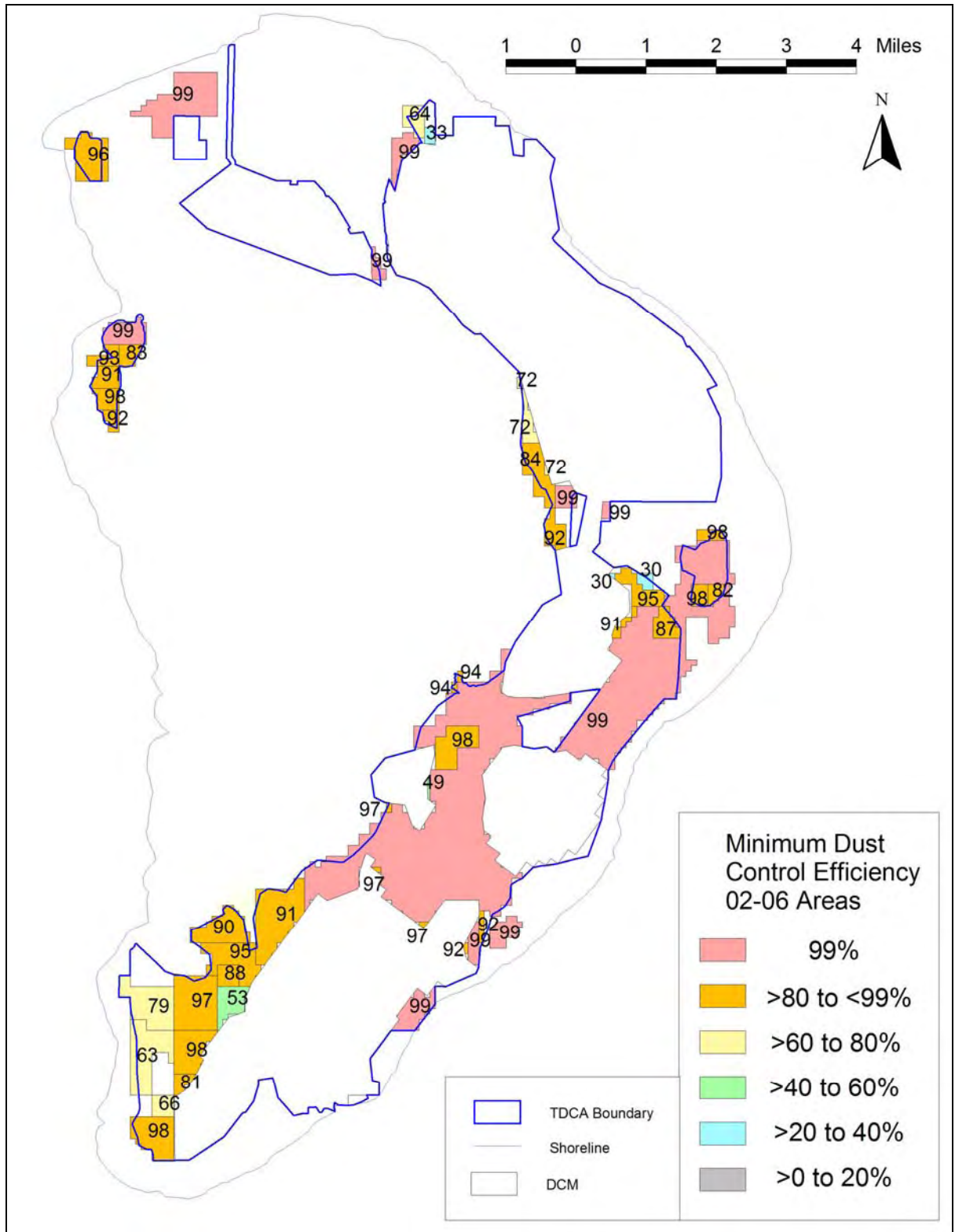
**Figure E4-1. Moat and Row Array Plan View (schematic).**



**Figure E4-2. Profile of Moat and Row with Approximate Dimensions (schematic).**

# EXHIBIT 5 -- TDCA MINIMUM DUST CONTROL EFFICIENCY MAP

Shown are MDCEs calculated according to Sections 3 and 4 of the agreement.



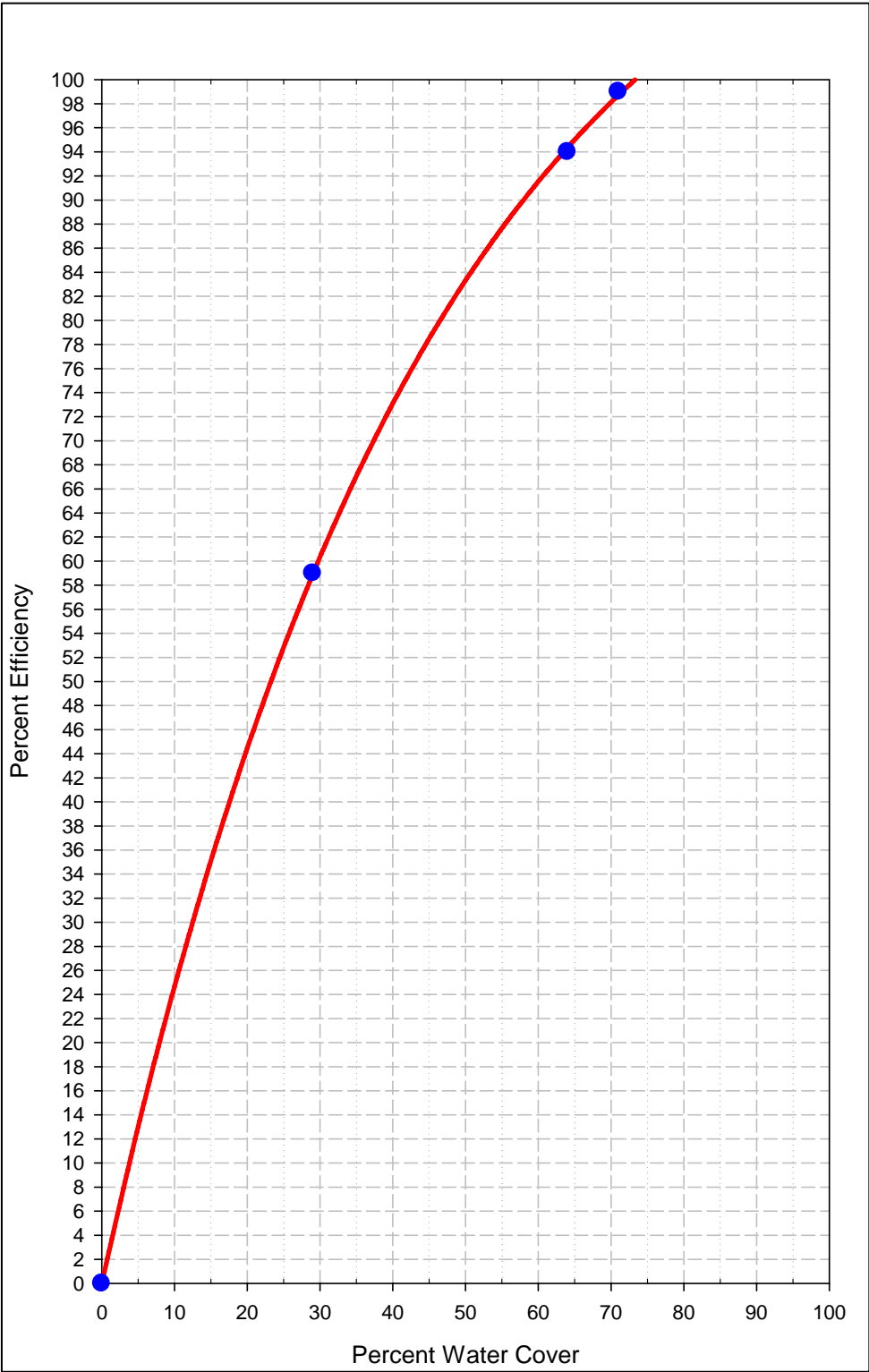
## **EXHIBIT 6 -- MDCE SELECTION PROCESS**

This exhibit summarizes the purpose of the MDCE Selection Process Spreadsheet. A copy of the Process Spreadsheet, which contains a description of the spreadsheet structure and operation, may be downloaded from the District's website at <http://www.gbuapcd.org/owenslake/MDCE-SelectionProcessSpreadsheet11-2006.xls>

The District developed the Dust ID Model as a tool for identifying dust control areas on the lake bed. The Dust ID Model computes the amount of dust being generated from each source area on the lake bed, but the results cannot be used without additional processing to identify the acceptable combinations of dust control required on each source area (that is, each area's minimum dust control efficiency or "MDCE") to achieve the federal 24-hour  $PM_{10}$  standard along the shoreline. There are many possible combinations of MDCEs that could produce the acceptable result of achieving the standard at the shoreline. For example, 50 percent control on hypothetical Area 1 and 99 percent control on Area 2 may produce the same modeled shoreline concentration as 99 percent control on Area 1 and 50 percent control on Area 2. However, the first combination might be more practical and less costly than the second, and for that reason it is important to have a process that can quickly and efficiently identify acceptable combinations. In all cases, the outcome of this process is some combination of area-by-area dust control efficiencies that produces a modeled attainment of the federal  $PM_{10}$  standard everywhere along the shoreline.

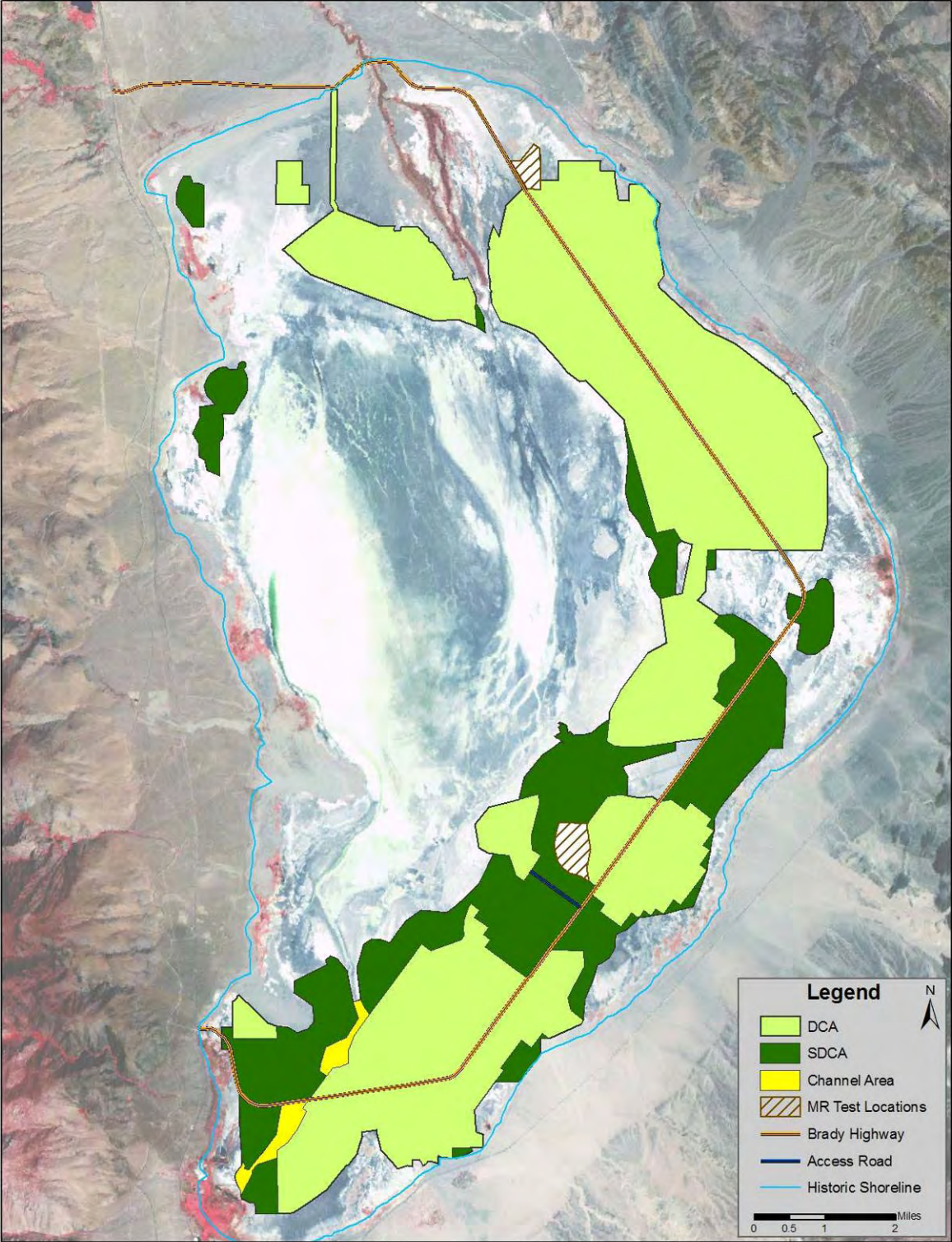
The process for selecting the acceptable combinations of dust control levels has been, heretofore, a manual process. The MDCE Selection Process Spreadsheet (Process Spreadsheet) was developed to more quickly and efficiently identify combinations of dust controls required to produce compliance with the federal 24-hour  $PM_{10}$  standard along the shoreline. The worksheet is set up so that MDCE calculations are automatic, yet it still allows manual adjustments to be made.

# EXHIBIT 7 -- SHALLOW FLOOD CONTROL EFFICIENCY CURVE



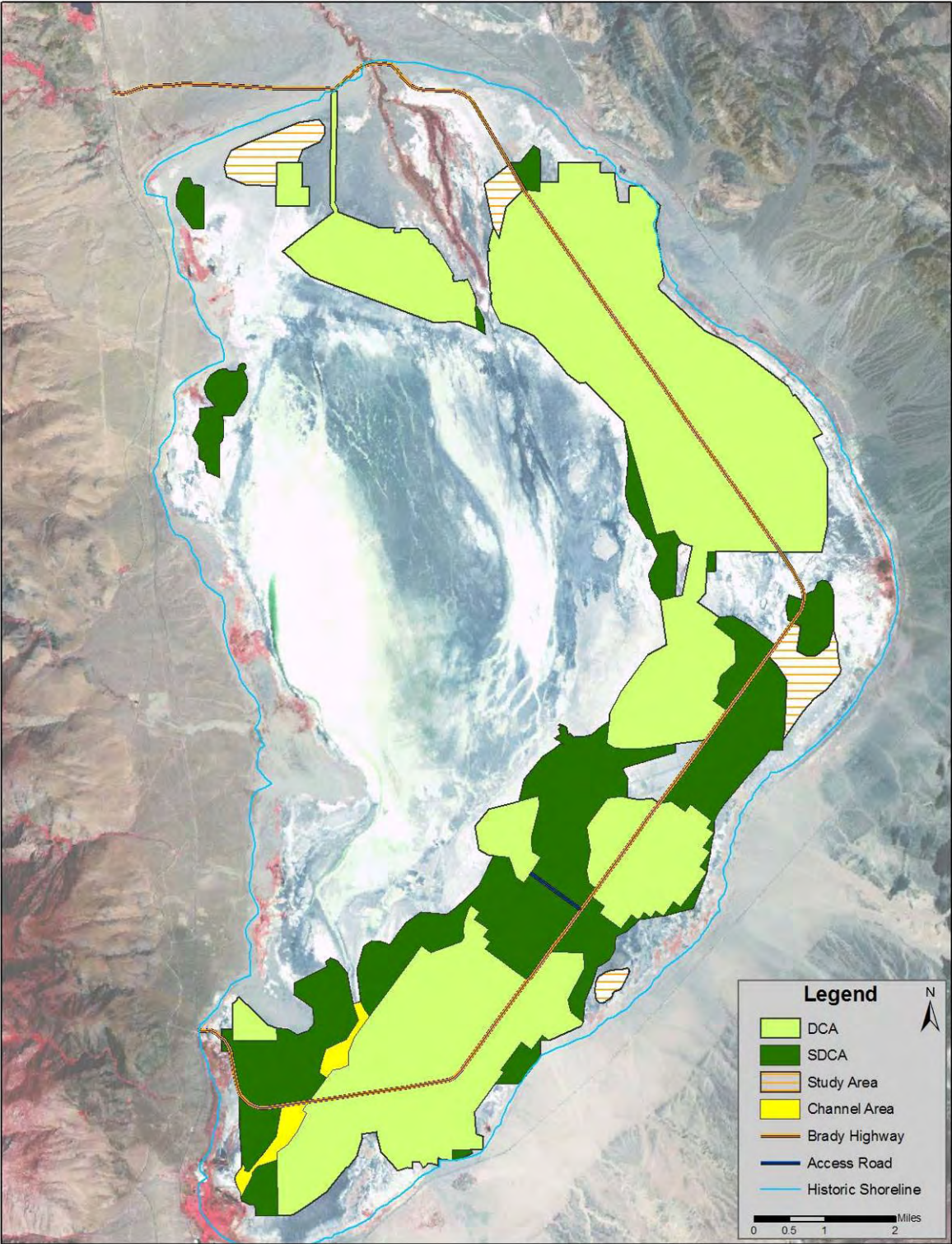
# EXHIBIT 8 -- MOAT AND ROW DEMONSTRATION PROJECT LOCATION MAP

*Two proposed moat and row demonstration project locations*



# EXHIBIT 9 -- STUDY AREA MAP

Four proposed study area locations



## EXHIBIT 10 -- SCHEDULE OF CONTINGENCY MEASURES

<i>Issue</i>	<i>Resolution</i>	<i>Duration</i>	<i>Units</i>
<b>Moat and Row</b>			
Eroded row	Install armoring to prevent further erosion	2	mo/mile
	Install sand fences to prevent further erosion	1	mo/mile
	Reconstruct row in place or adjacent	2	mo/mile
Filled moat	Re-excavate new moat outboard of filled moat, expand existing row onto filled moat	2	mo/mile
Filled sand fence	Clean out or flank with new sand fences	2	mo/mile
Collapsed sand fence	Repair or flank with new sand fences	1	mo/mile
Spacing too large	Pull in intervening sand fence	1	mo/mile
	Add intervening moat and row	3	mo/mile
	Enhance with vegetation and/or wetness	12 to 36	months
	Soil roughening	1 to 3	months/sq mi
	Conversion to reduced BACM/BACM	See Exhibit 11	
<b>Managed Vegetation</b>			
Emissions from bare areas	Enhance/restore vegetation	36	months
	Stabilize by other means (e.g., moisture, sand fences)	1 to 6	months/sq mi
Emissions from vegetated areas	Determine and establish necessary cover	36	months
	Stabilize by other means (e.g., moisture, sand fences)	1 to 6	months/sq mi
<b>Gravel Patches</b>			
Infilling pore spaces	Supplement gravel depth	4	months/sq mi
	Stabilize by other means (e.g., vegetation, wetness, sand fences)	6 to 36	months
<b>Shallow Flood</b>			
Emissions from dry areas (insufficient uniformity of wetting )	Wet dry areas. May require land leveling and/or additional laterals.	12	months
Generally too dry	Increase water application rate relative to ET	1	month
<b>Other features</b>			
Gravel source	Open new or re-open existing quarry	4	months
Emissions from roads, berms, etc.	Increase watering frequency	1	month
	Stabilize by other means (e.g., gravel, stabilizing agents)	1 to 4	months/sq mi

## EXHIBIT 11 -- MOAT AND ROW TRANSITION SCHEDULE

Activity	Duration (years )
Shallow flood transition from moat & row	1.9
Managed vegetation transition from moat & row	5.9
Gravel cover transition from moat & row	1.8
<i>Mutually agreeable exceptions:</i>	<i>Increase over and above durations listed above (years)</i>
1. Mainline capacity increase	2.1
2. New aqueduct turnout	1.4
3. New power feed	1.0

## EXHIBIT 12 -- DCM OPERATION SCHEDULE

Activity	Duration (years )
New area shallow flood DCM <sup>a</sup>	2.9
New area managed vegetation DCM <sup>a</sup>	6.1
New area gravel cover DCM <sup>a</sup>	2.2
<i>Mutually agreeable exceptions:</i>	<i>Increase over and above durations listed above (years)</i>
1. Mainline capacity increase	2.1
2. New aqueduct turnout	1.4
3. New power feed	1.0
4. Expanded CEQA triggered	1.4
<sup>a</sup> Assumes that total new area <2 square miles per year	

## EXHIBIT 13. DEFINITIONS

- A. “Background PM<sub>10</sub> concentration” shall mean the concentration of PM<sub>10</sub> caused by sources other than from wind blown dust emanating from the Owens Lake bed. For the purpose of modeling air quality impacts, the background concentration is assumed to be 20 µg/m<sup>3</sup> (micrograms per cubic meter) during every hour at all receptor locations. The monitored and modeled PM<sub>10</sub> emissions from the Keeler Dunes, which are located off the lake bed are treated as a separate dust source area and are not included in the background concentration.
- B. “Best Available Control Measures” or “BACM” shall have the same definition as in the federal Clean Air Act. Approved BACM in the 2003 SIP was associated with PM<sub>10</sub> emission reductions of at least 99 percent and includes managed vegetation, shallow flood, and gravel cover.
- C. “Contingency measures” shall mean dust control measures or modifications to the dust control measures that can be implemented to mitigate dust source areas that cause or contribute to an exceedance of the federal standard at the historic shoreline in the event that a previously approved control strategy was found to be insufficient.
- D. “Control Area” shall mean an area on the lake bed for which dust control is required.
- E. “Control efficiency” shall mean the relative reduction or percent reduction in PM<sub>10</sub> emissions resulting from the implementation of a control measure compared to the uncontrolled emissions.
- F. “Control measures” shall mean measures effective in reducing the PM<sub>10</sub> emissions from the lakebed surface over which they are implemented.
- G. “Dust control measure” or “DCM” shall mean measures designed to suppress sand motion and reduce dust emissions from the Owens Lake bed.
- H. “Dust ID Model” shall mean a computer-based air quality modeling approach developed as part of the 2003 SIP to identify emissive areas on the Owens Lake bed and to estimate the resulting PM<sub>10</sub> concentrations at the shoreline. See also “Dust ID Program.”
- I. “Dust ID Program” shall mean a long-term monitoring and modeling program that is used to identify dust source areas at Owens Lake that cause or contribute to exceedances and violations of the federal PM<sub>10</sub> standard. The current protocol for conducting the Dust ID Program is

included in the 2003 SIP (Exhibit 2 – Attachment 4). See also “Dust ID Model.”

- J. “Emission rate” shall mean the rate (expressed as mass per unit area per unit time) at which an air constituent (PM<sub>10</sub>, for example) is transported away from the surface of the lake bed.
- K. “Exceedance of the federal standard” or “exceedance” shall mean any single-day PM<sub>10</sub> concentration that is monitored or modeled to be above 150 µg/m<sup>3</sup> (24-hour average from midnight to midnight) at any location at or above the historic shoreline.
- L. “Historic shoreline” or “shoreline” shall mean the elevation contour line of 3,600 feet above mean sea level at Owens Lake, California.
- M. “Lake bed” or “Owens Lake bed” or “playa” shall mean the exposed surface within and below the historic shoreline.
- N. “Managed Vegetation” is a Dust Control Measure consisting of lakebed surfaces planted with protective vegetation.
- O. “May not lawfully be included in the SIP” shall mean that inclusion of the provision in question in the revisions to the 2003 SIP has been determined by binding judicial order to be unlawful.
- P. “MCDE-BACM” shall mean Dust Control Measures that achieve Minimum Dust Control Efficiency and are found to be appropriate for the area of application.
- Q. “Minimum Dust Control Efficiency” or “MDCE” shall mean the lowest dust control efficiency, as determined by the Dust ID model, in the Supplemental Dust Control Area necessary to meet the federal standard at the historic shoreline.
- R. “Moat and Row” shall mean a Dust Control Measure consisting of arrays of sand breaks that arrest sand motion.
- S. “PM<sub>10</sub>” or “particulate matter” shall mean atmospheric particulate matter less than 10 micrometers in nominal aerodynamic diameter.
- T. “PM<sub>10</sub> monitor” shall mean an instrument used to detect the concentrations of PM<sub>10</sub> in the air.
- U. “Sand flux monitor” shall mean a device used to measure the amount and/or rate of moving or saltating sand and sand-sized particles caused by wind erosion.

- V. “Shallow Flood” is a Dust Control Measure consisting of lakebed areas wetted to a specified proportion of surface coverage.
- W. “2003 SIP” or “2003 Owens Valley PM<sub>10</sub> State Implementation Plan” shall mean the Owens Valley PM<sub>10</sub> Planning Area Demonstration of Attainment State Implementation Plan 2003 Revision – Adopted November 13, 2003.
- X. “Supplemental Control Requirements” or “SCR” shall mean Dust Control Measures required by the District on areas outside of the DCA that cause or contribute to an exceedance of the federal PM<sub>10</sub> standard at the historic shoreline of Owens Lake.