

## SETTLEMENT AGREEMENT

WHEREAS the Natural Resources Defense Council ("Plaintiff") filed a complaint in this action (CV Number 06-4843) against Defendants the United States Environmental Protection Agency ("EPA") and Stephen L. Johnson, in his official capacity as Administrator of EPA, on August 3, 2006; and the National Association of Clean Water Agencies and the County of Los Angeles and Los Angeles County Flood Control District ("Intervenors") subsequently filed complaints in intervention against Defendants;

WHEREAS by orders dated March 21, 2007 and April 7, 2008, the Court has ruled that EPA failed to perform its mandatory duties to complete the required studies under Section 104(v) of the Clean Water Act ("CWA"), 33 U.S.C § 1254(v), by October 10, 2003, and to publish water quality criteria under CWA § 304(a)(9)(A), 33 U.S.C. § 1314(a)(9)(A), by October 10, 2005;

WHEREAS by a Court order issued on November 19, 2007, all Administrative Procedure Act ("APA") claims in Plaintiff's and Intervenors' Complaints were dismissed, pursuant to a stipulation of voluntary dismissal;

WHEREAS the signatories hereto ("the Parties") have entered into a Consent Decree that sets forth deadlines for EPA to complete studies and publish water quality criteria;

WHEREAS the Parties intend this Settlement Agreement ("Agreement") to set forth terms for certain matters not addressed in the Consent Decree regarding (1) studies related to pathogens and pathogen indicators in coastal recreation waters and (2) development of recreational water quality criteria based on those studies;

NOW, THEREFORE, the Parties agree as follows:

### I. General Terms

1. The Parties to this Settlement Agreement are the Natural Resources Defense Council, the National Association of Clean Water Agencies, Los Angeles County and Los Angeles County Flood Control District, and EPA. The Parties understand that (a) Stephen L. Johnson was sued in his official capacity as Administrator of the United States Environmental Protection Agency, and (b) responsibilities arising under this Agreement are to be performed by EPA and not by Stephen L. Johnson in his individual capacity.

2. This Agreement applies to, is binding upon, and inures to the benefit of the Parties (and their successors, assigns, and designees).

3. For purposes of this Settlement Agreement, the following terms shall have the meanings provided below:

(a) "EPA" means Stephen L. Johnson, the Administrator of EPA, or the Administrator's duly authorized representative, and the United States Environmental Protection Agency;

(b) "Plaintiff" means the Natural Resources Defense Council; "Intervenors" means the National Association of Clean Water Agencies and the County of Los Angeles and Los Angeles County Flood Control District;

(c) The "United States" means the United States of America, including its officers, agencies, departments and instrumentalities;

(d) "Critical Path Science Plan" or "CPSP" means the document EPA released on August 31, 2007, which describes, among other things, the studies EPA indicated it intended to conduct for the purpose of developing new or revised water quality criteria pursuant to Section 304(a)(9)(A) of the CWA, 33 U.S.C. § 1314(a)(9)(A);

(e) "Recreational Water Quality Criteria" refers to new or revised water quality criteria pursuant to CWA § 304(a)(9)(A) of the CWA, 33 U.S.C. § 1314(a)(9)(A).

(f) "Epidemiological Study" means a study of human populations exposed to coastal recreation waters that attempts to statistically link human health effects to concentrations of a substance or substances that indicate the potential for human infectious disease;

(g) "POTW-impacted beach" means a beach adjacent to coastal recreation waters that is affected by discharges from one or more publicly owned treatment works ("POTWs"), as defined by 40 C.F.R. Part 403;

(h) "Complete" or "Completed" when modifying any form of the word "study" in Paragraphs 4, 5, and 6 of this Agreement, means EPA has (a) concluded its work related to the project identified in this Agreement including, as deemed necessary by EPA, internal and/or external peer review and addressing comments from such peer reviews, and (b) provided written notice to the Plaintiff and Intervenors as described in Paragraph 6 below.

(i) "External Peer Review" shall mean either peer review conducted by EPA using independent, external peer reviewers, or peer review conducted by a professional journal. If peer review conducted by a professional journal cannot be concluded in time for EPA to meet the deadline in Paragraph 4 of this Agreement, EPA will conduct peer review using independent, external peer reviewers.

(j) "Consent Decree" refers to the Consent Decree filed in this case.

(k) "Study" or "studies" means the actions identified as "study" or "studies" in Paragraph 4 of this Settlement Agreement.

(l) "Rapid test method" means a method for testing the water quality of coastal recreation waters for which results are available as soon as practicable after a water quality sample is received by the testing facility. NRDC believes "as soon as practicable" to be two hours and EPA believes it to be no more than six hours.

## **II. Studies to Develop Recreational Water Quality Criteria**

4. EPA agrees to complete the following studies by December 15, 2010:

(a) Conduct epidemiological studies at POTW-impacted marine beaches in Fairhope, Alabama and Goddard Rhode Island (P1, P2)<sup>1</sup>

(b) Provide technical assistance in support of an epidemiological study at a beach in Avalon, California considered to be impacted primarily by untreated human fecal contamination (P3)

(c) Conduct QMRA (based on measurement of pathogenic organisms and indicators) to estimate illness at a freshwater beach impacted by agricultural animal sources of fecal contamination (location to be determined) (clarifying P4)

(d) Study various parameters that affect performance of qPCR signal for enterococci and compare with other methods and pathogens in treated wastewater mixed with ambient waters (enterococci, E. coli, Cryptosporidium, and enterovirus) (P8)

(e) Design and evaluate a monitoring approach that will characterize the quality of beach waters that takes into account the spatial and temporal variability associated with water sampling (P12)

(f) Evaluate multiple indicator/method combinations to develop quantifiable relationships (P15)

(g) Study the effects of sample holding time, sample storage, and preservation on sample integrity for future use (P16)

(h) (1) Develop, refine, validate, and publish one or more new ambient test method(s) and (2) develop, refine, validate, and publish one or more new wastewater test method(s) provided the results of P8 and P18 indicate that a new wastewater test method is necessary. (P17)

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<sup>1</sup> P1, P2 and so forth refer to project numbers in EPA's CPSP.

- (i) Evaluate the suitability of individual combinations of indicators and methods for different CWA programs (P18)
- (j) Re-analyze archived NEEAR samples using molecular methods for other indicators, including at least E. coli, provided the samples have not degraded during storage (depending on the outcome of P16 and the nature of the indicator/method) (P22)
- (k) Pilot test Virtual Beach model for beach notification and advisories/closures (P23)
- (l) Refine and validate existing water quality models for freshwater beach notification and advisories/closures (P24)
- (m) Refine and validate other existing water quality models for marine beach notification and advisories/closures (P25)
- (n) Develop technical protocol for site-specific application of predictive models to be used in making beach advisory decisions (P26)
- (o) Compare EPA's 1986 Bacteria Criteria recommendations to NEEAR studies to better understand the relationship between fecal contamination and illness in these data sets, provided EPA can obtain the raw data used to develop the 1986 Criteria (P27)
- (p) Evaluate applicability of NEEAR Great Lakes data to inland waters (P28)
- (q) Conduct statistical analysis of children data from epidemiological studies (P29)

5. (a) For the studies identified in subparagraphs 4(h)(2), 4(j), and 4(o), if EPA determines that it cannot complete the study due to the contingency identified, EPA will notify the other Parties in writing of EPA's determination and the basis for the determination no later than July 15, 2010.

(b) If any Party disagrees with EPA's determination under Paragraph 5(a), such Party shall notify EPA in writing, explaining the basis for the disagreement no later than 30 days after EPA's notification. If EPA continues to believe that its determination is appropriate, the provisions in Section VIII (Dispute Resolution) will apply.

6. When it completes a study described in Paragraph 4 of this Agreement, EPA will provide written notice to the other Parties, including a summary of the study and findings, and a statement that the study has been completed. This Paragraph does not apply to the study described in Paragraph 4(b), which is not being conducted by EPA.

7. If an epidemiological study proposed by the Southern California Coastal Water Research Project (SCCWRP) for Doheny Beach is initiated by SCCWRP no later than December 2009, EPA will provide technical assistance on study design and analysis.

8. For any epidemiological studies to be completed by EPA under Paragraph 4 of this Agreement and Paragraph 5 of the Consent Decree, EPA will use a suite of indicators and methods that EPA determines to be the most promising for the development of new or revised recreational water quality criteria. In making this determination, EPA will consider the indicators and methods that were used in previously conducted epidemiological studies and new indicators and methods that EPA determines to be promising for the development and implementation of new or revised recreational water quality criteria.

9. (a) EPA will continue to conduct research currently underway to identify genetic sequences that could form the basis of chicken and seagull specific fecal source assays.

(b) If EPA determines that it can develop chicken and seagull specific fecal source assays, EPA will evaluate the assays for specificity and sensitivity using a reference collection of fecal samples, as well as environmental water samples with known sources of fecal contamination.

(c) No later than July 15, 2011, EPA will notify the other Parties in writing whether EPA was able to develop the assays and evaluate the assays as described in subparagraph 9(a). If EPA is able to complete the evaluation by July 15, 2011, the notification will include a brief summary of such evaluation.

### **III. Other Agreements**

10. (a) Subject to any statutory or regulatory limitations restricting the distribution of confidential business information or private information (*e.g.*, names, addresses), EPA will provide access to data from the studies identified in Paragraph 4 above and Paragraph 5 of the Consent Decree after EPA has conducted any quality assurance/quality control review and, as deemed necessary by EPA, internal or external peer review, including addressing the comments of such review. EPA may determine to provide access to the data by notifying the Parties in writing that the data are available for their review and its location, or by other method of transmission.

(b) Subject to any statutory or regulatory limitations restricting the distribution of confidential business information or private information (*e.g.*, names, addresses), EPA will provide access to data from the epidemiological studies previously conducted by EPA in support of the new or revised recreational water quality criteria no later than June 15, 2009. EPA may determine to provide access to the data by notifying the Parties in writing that the data are available for their review and its location, or by other method of transmission.

11. EPA will convene a stakeholder workshop or other mechanism for stakeholder input during 2009, 2010, and 2011. These workshops will provide an opportunity for Plaintiff, Intervenor, and other interested stakeholders to provide input to EPA and/or bring issues to EPA associated with the development of the new or revised criteria to be issued by October 2012. EPA expects these issues to include issues related to implementation of the new or revised water quality criteria that EPA will publish in 2012. The focus of the 2009 and 2010 workshops will be for EPA to update stakeholders on the progress EPA has made in completing studies and framing the issues associated with the development of the new or revised criteria and for Plaintiff, Intervenor, and other interested stakeholders to comment on EPA's update. The focus of the 2011 workshop will be to provide an opportunity for Plaintiff, Intervenor, and other interested stakeholders to comment on EPA's evaluation, synthesis, summarization and statistical analysis of the studies and development of options for the overall structure and content of the recreational water quality criteria that EPA will publish in 2012.

12. EPA will validate and publish a rapid test method for the new or revised criteria by October 15, 2012. Validation of a rapid test method will involve conducting an inter-laboratory study, the purpose of which is to characterize method performance (including recovery and precision) for a rapid method in reference matrices and ambient recreational waters (fresh and marine) in multiple laboratories and to develop quantitative quality control acceptance criteria. Publication does not include promulgation of an EPA-approved test method in the Code of Federal Regulations.

13. EPA will review epidemiological studies of swimming-related health risks due to fecal contamination that are completed by entities other than EPA, including, but not limited to, studies of runoff-impacted beaches and beaches impacted by avian sources, if the results are made known to EPA by December 2010. EPA will consider any relevant study findings in developing recreational water quality criteria. EPA will either incorporate the relevant study findings into the recreational water quality criteria or explain, in its notice of proposed new or revised water quality criteria and solicitation of public comment, the reasons why such study findings are not appropriate for incorporation into the recreational water quality criteria.

14. No later than December 15, 2011, EPA will convene an Experts Scientific Workshop involving both EPA scientists and external scientists for the primary purpose of obtaining input on what future science and research might be conducted to further improve the understanding of potential human health risks from exposure to fecal contamination from avian wildlife and other wildlife in coastal recreation waters. If the experts at the Experts Workshop identify one or more studies that might be conducted to further improve the understanding of the potential health risks from exposure to fecal contamination from avian wildlife or other wildlife, EPA shall evaluate whether the studies should be performed as part of the Agency's review (between 2012 and 2017) of the criteria that EPA will publish in 2012, and EPA shall advise the parties to this Agreement of the results of EPA's evaluation no later than December 15, 2012.

#### **IV. Compliance Reporting**

15. EPA will provide to Plaintiff and Intervenors a semi-annual status report concerning the actions of EPA under this Settlement Agreement for the six-month periods from January 1 - June 30 and July 1 - December 31 each calendar year from January 1, 2009 until July 1, 2012. Each report shall be in writing, shall be provided within fifteen days after the conclusion of the six-month period to which it relates (January 15 or July 15), and shall include a description of the actions taken by EPA with respect to its responsibilities under this Settlement Agreement during the preceding six-month period, and a description of the actions EPA intends to take with respect to its responsibilities under the Settlement Agreement during the following six months. EPA may use the semi-annual report to provide written notice to Plaintiff and Intervenors regarding completion of studies and avian marker research pursuant to Paragraphs 6 and 9 of this Agreement.

#### **V. Effective Date**

16. This Agreement shall become effective upon entry of the Consent Decree by the Court. If for any reason the Court does not enter the Consent Decree, the responsibilities set forth in this Agreement are null and void.

#### **VI. Release by Plaintiff and Intervenors and Reservation of Rights**

17. This Agreement shall not constitute or be construed as an admission or adjudication by the United States or EPA of any question of fact or law with respect to any claim related to CWA §§ 104(v) and 304(a)(9)(A). Nor is it an admission of violation of any law, rule, regulation, or policy by the United States or EPA.

18. This Agreement does not waive any Party's right to challenge any final agency action following compliance with the terms of this Agreement. EPA does not waive any defenses to such a challenge.

#### **VII. Termination of Settlement Agreement**

19. This Agreement shall terminate upon the termination of the Consent Decree.

#### **VIII. Dispute Resolution and Remedy for Non-Compliance**

20. In the event of a disagreement concerning any aspect of this Agreement, the dissatisfied Party shall provide the other Party with written notice of the dispute and a request for negotiations. The Parties shall meet and confer in order to attempt to resolve the dispute within 21 days of the written notice, or such time thereafter as is mutually agreed. If the Parties are unable to resolve the dispute within 21 days of such meeting, then Plaintiff's or any of the Intervenors' sole remedy is to reactivate the litigation with respect to Clean Water Act Section 104(v) in CV Number 06-4843 to seek an order pursuant to the Clean Water Act to obtain the same action identified in this Settlement Agreement. EPA does not waive or limit any defense relating to such litigation. The Parties agree that contempt of court is not an available remedy under this Agreement.

### **IX. Force Majeure**

21. The Parties recognize that the performance of this Agreement is subject to fiscal and procurement laws and regulations of the United States which include, but are not limited to, the Anti-Deficiency Act, 31 U.S.C. § 1341, *et seq.* The possibility exists that circumstances outside the reasonable control of EPA could delay compliance with the responsibilities contained in this Agreement. Such situations include, but are not limited to, a government shutdown; catastrophic environmental events requiring immediate and/or time-consuming response by EPA; and extreme weather events (including but not limited to drought and hurricanes) that interfere with the completion of field data collection. Should a delay occur due to such circumstances, any resulting failure to meet the responsibilities set forth herein shall not constitute a failure to comply with the terms of this Agreement, and any deadlines so affected shall be extended one day for each day of the delay, or if a force majeure event interferes with EPA's collection of field data, the deadline shall be extended for a reasonable period to allow EPA to complete data collection, provided the data collection is completed in time to publish water quality criteria no later than April 30, 2013, or to an alternative date jointly agreed upon by the Parties. EPA will provide Plaintiff and Intervenors with reasonable notice in the event that EPA invokes this Paragraph of the Agreement. Any dispute regarding invocation of this provision shall be resolved in accordance with the dispute resolution provision of Paragraph 20 of this Agreement.

### **X. Modifications**

22. If a subsequent change in law relieves EPA of its responsibilities concerning matters addressed in this Agreement, then the Parties shall amend the Agreement to conform to such changes. Any dispute regarding invocation of this provision shall be resolved in accordance with the dispute resolution provision of Paragraph 20 of this Agreement.

### **XI. Agency Discretion**

23. Except as expressly provided herein, or in any subsequent amendment to this Settlement Agreement, nothing in this Settlement Agreement shall be construed to limit

or modify the discretion accorded to EPA by the CWA, the APA, or by general principles of administrative law.

## **XII. Notice**

24. All notices required or made with respect to this Agreement shall be in writing and shall be effective on the date that notice is delivered by an overnight mail/delivery service. For any matter relating to this Agreement, the contact persons are:

For Plaintiff, Natural Resources Defense Council:

Aaron Colangelo  
Natural Resources Defense Council  
1200 New York Avenue NW, Suite 400  
Washington, D.C. 20005

For Intervenor, NACWA:

David W. Burchmore  
Squire, Sanders & Dempsey L/L/P.  
4900 Key Tower  
127 Public Square  
Cleveland, OH 44114

For Intervenors, The County of Los Angeles and Los Angeles County Flood Control District:

Rossana D'Antonio  
Principal Engineer  
L.A. County Department of Public Works  
Watershed Management Division  
900 South Fremont Avenue  
Alhambra, CA 91803

and

Laurie E. Dods  
Deputy County Counsel  
Los Angeles County Hall of Administration  
500 West Temple Street  
Los Angeles, CA 90012

For the Defendants:

Associate General Counsel, Water Law Office  
Office of General Counsel (2355)  
U.S. Environmental Protection Agency  
401 M Street, S.W.  
Washington, DC 20460

Chief,  
Environmental Defense Section  
Environment & Natural Resources Division  
United States Department of Justice  
P.O. Box 23986  
Washington, D.C. 20026-3986

Upon written notice to the other Party, any Party may designate a successor contact person for any matter relating to this Agreement.

**XIII. Representative Authority**

25. Each undersigned representative of the Parties certifies that he or she is fully authorized by the Party to enter into, execute, and bind such Party to this Agreement.

**XIV. Mutual Drafting**

26. This agreement was negotiated between EPA, Plaintiff, and Intervenors and jointly drafted by the Parties. Accordingly, the Parties hereby agree that any and all rules of construction to the effect that ambiguity is construed against the drafting Party shall be inapplicable in any dispute concerning the terms, meaning, or interpretation of this Agreement.

**XV. Counterparts**

27. This Agreement may be executed in any number of counterpart originals, each of which shall be deemed to constitute an original agreement, and all of which shall constitute one agreement. The execution of one counterpart by any Party shall have the same force and effect as if that Party had signed all other counterparts.

**XVI. Use of Settlement Agreement**

28. This Agreement shall not constitute an admission or evidence of any fact, wrongdoing, misconduct, or liability on the part of any Party.

**XVII. Compliance with Other Laws**

29. No provision of this Agreement shall be interpreted as or constitute a commitment or requirement that EPA obligate or pay funds in contravention of the Anti-Deficiency Act, 31 U.S.C. § 1341, or take any action in contravention of the APA, the CWA, or any other law or regulation, either substantive or procedural.

#### **XVIII. Applicable Law**

30. This Agreement shall be governed by and construed under the laws of the United States.

#### **XIX. Third Party Beneficiaries**

31. Nothing in this Agreement shall be construed to make any other person or entity not executing this Agreement a third-party beneficiary to this Agreement.

The Parties consent to the form and substance of the foregoing Agreement.

FOR THE DEFENDANTS:

Ronald J. Tenpas  
Assistant Attorney General  
Environment and Natural Resources Division

Dated: 8/7/08

By: Stephen Samuels for  
Martin F. McDermott  
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FOR THE PLAINTIFF, Natural Resources Defense Council:

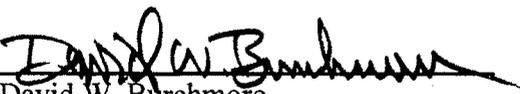
Dated: 8/7/08

By: Aaron Colangelo

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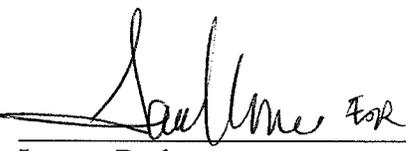
FOR INTERVENOR, National Association of Clean Water Agencies:

Dated: 8/7/08

By:   
David W. Burchmore  
Squire, Sanders & Dempsey L/L/P.  
4900 Key Tower  
127 Public Square  
Cleveland, OH 44114

FOR INTERVENORS, the County of Los Angeles and Los Angeles County Flood Control District:

Dated: 8/7/08

By:   
\_\_\_\_\_  
Lauren Dods  
Deputy County Counsel  
Office of the County Counsel  
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