DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS
441 G STREET, NW
WASHINGTON, DC 20314-1000

REPLY TO
ATTENTION OF

CECW-DCG

19 March, 2015

Mr. David Smith
DMB Redwood City Saltworks
Stice & Block, LLP
2201 Broadway, Suite 604
Oakland, California 94612

Dear Mr. Smith:

This correspondence is in reference to your initial submittal of May 30, 2012, and additional information provided on August 29, 2012, requesting the withdrawal of the preliminary jurisdictional determination dated February 22, 2010, and requesting a final approved jurisdictional determination of the extent of jurisdictional waters of the United States (U.S.) and navigable waters occurring on Redwood City Salt Plant project site located north of US 101 and east of Seaport Boulevard, in Redwood City, San Mateo County, California. You also requested that the Corps make the jurisdictional determination under the Rivers and Harbors Act of 1899 and that the U.S. Environmental Protection Agency (EPA) make the jurisdictional determination under the Clean Water Act. After being informed by the Corps of its proposed decision under the Clean Water Act, EPA elected to make the final Clean Water Act jurisdictional determination under the special case procedures in the January 19, 1989 "Memorandum of Agreement Between the Department of the Army and the Environmental Protection Agency Concerning the Determination of the Geographic Jurisdiction of the Section 404 Program and the Application of the Exemptions Under Section 404(f) of the Clean Water Act." The Corps headquarters will coordinate, as necessary and appropriate, with EPA on the Clean Water Act jurisdictional determination for this site, and that jurisdictional determination will be conducted separately from the approved jurisdictional determination under the Rivers and Harbors Act of 1899.

The attached memorandum *Basis for RHA Section 10 Approved Jurisdictional Determination, Redwood City Saltworks* explains my decision regarding the Rivers and Harbors Act of 1899 Section 10 approved jurisdictional determination. The memorandum includes a delineation map entitled, "*Approved Jurisdictional Determination; Redwood City Salt Plant*," in one sheet and date certified March 19, 2015, which depicts the extent and location of navigable waters of the U.S. within the boundary area of the site that are subject to U.S. Army Corps of Engineers' regulatory authority under Section 10 of the Rivers and Harbors Act of 1899.

This approved jurisdictional determination supersedes the preliminary jurisdictional determination dated February 22, 2010. The review area for this approved jurisdictional determination encompasses only the salt production facilities. This approved jurisdictional determination will remain valid for a period of five years, unless new information warrants revision of the determination before the expiration date. This approved jurisdictional determination under the Rivers and Harbors Act of 1899 is consistent with the official Corps

guidance of January 9, 2014, and March 25, 2014, which is attached to the enclosed memorandum.

You are advised that this approved jurisdictional determination may be appealed through the U.S. Army Corps of Engineers' *Administrative Appeal Process*, as described in 33 C.F.R. Part 331 (65 Fed. Reg. 16,486 (Mar. 28, 2000)), and outlined in the enclosed flowchart and *Notification of Administrative Appeal Options and Process and Request for Appeal* (NAO-RFA) Form. If you do not intend to accept the approved jurisdictional determination, you may elect to provide new information to this office for reconsideration of this decision. If you do not provide new information to this office, you may elect to submit a completed NAO-RFA Form to the Office of the Assistant Secretary of the Army for Civil Works to initiate the administrative appeal process. You will relinquish all rights to a review or an appeal, unless this office receives new information for reconsideration or the Office of the Assistant Secretary of the Army for Civil Works receives a completed NAO-RFA Form within 60 days of the date on the NAO-RFA Form. If you intend to accept this approved jurisdictional determination, you do not need to take any further action associated with the administrative appeal process.

Any proposed structures and work in navigable waters of the United States that have not been previously authorized will require Department of the Army authorization pursuant to Section 10 of the Rivers and Harbors Act of 1899, as amended (33 U.S.C. § 403 *et seq.*).

You may refer any questions on this matter to David Olson at (202) 761-4922 or to Max Wilson at 202-761-8544.

Sincerely,

John W. Peabody
Major General
Deputy Commanding General
for Civil and Emergency Operations

Enclosures

DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS
441 G STREET, NW
WASHINGTON, DC 20314-1000

REPLY TO
ATTENTION OF

CECW-DCG

19 March, 2015

MEMORANDUM FOR RECORD

SUBJECT: Basis for Rivers and Harbors Act of 1899 Section 10 Approved Jurisdictional Determination, Redwood City Saltworks

1. In a letter dated 30 May 2012, Redwood City Saltworks requested the U.S. Army Corps of Engineers (Corps) to provide a jurisdictional determination under the Rivers and Harbors Act of 1899 (RHA) and the U.S. Environmental Protection Agency (EPA) to provide a jurisdictional determination under the Clean Water Act (CWA) for the 1,365 acres that comprise the Redwood City Salt Plant. [Attachment 1] In an email message dated 30 October 2012, the EPA stated that the Corps should follow normal procedures and make the approved jurisdictional determination (AJD) under both the RHA and the CWA. Since the applicant requested a jurisdictional determination in 2012, the Corps has coordinated with EPA on several occasions regarding CWA jurisdiction. On 18 March 2015, after being informed by the Corps of its proposed decision under the CWA, the EPA elected to make the final determination of CWA jurisdiction under the special case procedures in the 19 January 1989 "Memorandum of Agreement Between the Department of the Army and the Environmental Protection Agency Concerning the Determination of the Geographic Jurisdiction of the Section 404 Program and the Application of the Exemptions Under Section 404(f) of the Clean Water Act."

2. This memorandum constitutes the Corps' AJD under the RHA. This AJD is being made at the level of the Corps headquarters in accordance with the direction provided by the Assistant Secretary of the Army (Civil Works) in a Memorandum for the Chief of Engineers dated 7 November 2014. [Attachment 2] I have elected to use this format to document the AJD, rather than the typical elective form used for such purposes, because of the unique nature of the site and the extensive analysis and long process leading up to this AJD. In finalizing this AJD, I carefully and thoroughly reviewed all of the relevant facts and literature, conducted a site visit to the Redwood City Salt Plant, and consulted extensively with Corps legal and regulatory experts. Information and sources consulted included Cargill's application documentation, the Corps Chief Counsel's legal guidance, the Corps San Francisco District regulatory and legal staff, and the Corps Headquarters regulatory and legal staff. I also met with senior staff from EPA Headquarters in Washington DC, as well as the Save the Bay Executive Director in San Francisco. In addition, I personally reviewed applicable sections of the CWA and RHA, as well as supporting regulations; various judicial decisions relevant to my determination, including *Froehlke, Milner*, and *Rapanos*, and other relevant San Francisco Bay area legal cases; the 2008 Corps-EPA guidance to implement *Rapanos*; as well as analytical documentation pertaining to the site, including a regulatory analysis by Peter R. Baye. This extensive and in-depth review process and analysis greatly informed my understanding of the relevant statutory and regulatory provisions, applicable case law, and fact-specific realities pertaining to this site. The widely

varying opinions regarding RHA and CWA jurisdiction over this site offered in the course of this review further emphasized the complex facts specific to this site, and reinforced the need for deliberate and thorough consideration of every possible aspect of this site. However, the reasoning, conclusions, and decisions set forth in this memorandum are mine and mine alone.

3. Site location: The site is located near Westpoint Slough near Seaport Boulevard, Redwood City, San Mateo County, California. The site is located at latitude 37.49956°N, longitude -122.19552°W.

4. Site description: The site consists of a 1,365-acre salt production facility, which manufactures salt as part of an extensive solar evaporation process. This AJD applies to the 1,365-acre Redwood City Salt Plant, which is the area within the heavy black outline on the attached map. [Attachment 3]

5. Site visits were conducted by Corps headquarters staff on September 5, 2008, June 8, 2009, and February 18, 2015.

6. On 9 January 2014, the Chief Counsel of the Corps issued a memorandum providing legal principles to guide the determination of regulatory jurisdiction at the Redwood City Salt Plant under the RHA and the CWA. [Attachment 4] The Chief Counsel supplemented this legal guidance on 25 March 2014. [Attachment 5]

RHA Jurisdiction

7. Attachments 4 and 5 explain the legal basis for the determination of RHA jurisdiction at this site and are incorporated by reference in this AJD. Because of the history of the eastern and western portions of the Redwood City Salt Plant site, the memoranda addressed those two portions separately for purposes of determining RHA jurisdiction. The western portion was developed for salt production prior to 1940; the eastern portion was developed for salt production under a War Department permit issued on 16 January 1940. In several permit actions from 1940 to today, the War Department or Department of the Army (Army) either portrayed the western portion as non-jurisdictional improved lands, or explicitly determined that the area interior to the dikes of an adjacent parcel was not subject to RHA jurisdiction. Because of this history and the analysis set forth in Attachment 5, the Corps declines to assert RHA jurisdiction over that portion of the site. The Army previously exercised RHA jurisdiction over eastern portions of the site and explicitly reserved its jurisdiction over those portions in the 1940 War Department permit. Attachments 4 and 5 explain that for areas that have been cut off from tidal influence by dikes, such as is the case with the eastern portion of the site, only those areas that were below mean high water (MHW) immediately prior to the construction of the dikes remain subject to RHA jurisdiction, unless there was surrender of jurisdiction.

8. The Corps has determined that the areas shown as double-sided sloughs on Attachment 3 to this memorandum were below MHW immediately prior to the permitting and construction of the dikes authorized by the 16 January 1940 War Department permit submitted as part of the jurisdictional determination request package. It is reasonable to conclude that these areas are shown as double-sided sloughs because they were below MHW at that time and were subject to

tidal influence and the ebb and flow of tidal waters. This is confirmed by the applicant's "Josselyn Analysis," dated 29 August 2012, which reports that it was the convention in the early 20th century for U.S. Coast and Geodetic Survey maps to show a line at the edge of the marsh that reflected the MHW line. [Attachment 6] The corollary to this conclusion is that the area through which the double-sided sloughs ran was above the MHW line. This is supported by the cross-section plan attached to the War Department permit. [Attachment 7] This cross-section shows that the marsh was at mean higher high water, which is above mean high water. Therefore, only those areas within the eastern portion of the site shown as double-sided sloughs on the attached map are currently subject to RHA jurisdiction. The area of the salt plant outside those double-sided sloughs is not subject to RHA jurisdiction.

9. An alternative analysis of RHA jurisdiction over the eastern portion of the site might be derived by applying the Corps San Francisco District's long-standing guidance on determining RHA jurisdiction behind dikes. [Attachment 8] Analysis based on this guidance yields the same result. This guidance employs a three-prong test for determining what areas are subject to RHA jurisdiction and is more restrictive than the standard set forth in the Chief Counsel's memoranda. The second prong of the District's test requires that, for an area to be subject to RHA jurisdiction, it must have been below MHW before the dikes were built, which is the same requirement discussed above in paragraph eight. The other two prongs of the test require that for an area to be subject to RHA jurisdiction, the area must be presently at or below MHW, and there is no evidence that the area was ever above MHW. All three prongs of the District's test must be satisfied for an area behind a dike to be subject to RHA jurisdiction. Applying the District's guidance to the circumstances at the site under discussion, it is reasonable to conclude that the double-sided sloughs identified on Attachment 3 were never substantially altered and remain below the plane of what would be MHW (with the exception of the areas filled by interior dikes that separate various cells in the bittern ponds and pickle ponds) because the locations of these sloughs are still visible on current aerial photographs of the site. Therefore, as explained in the previous paragraph, these double-sided sloughs are considered to be areas below MHW as shown on Figure 1 and are thus subject to jurisdiction pursuant to Section 10 of the RHA.

10. The San Francisco District had a geographer from the Corps' Omaha District calculate the acreage of the double-sided sloughs shown on U.S. Coast and Geodetic Survey Sheet 4643 that are within the eastern portion of the Redwood City Salt Plant. [Attachment 9] Those calculations were made by a geographic information system after February 2014 and indicate that there are 56.87 acres of double-sided sloughs in the eastern portion of the Redwood City Salt Plant.

11. Although case law from the Ninth Circuit Court of Appeals could be interpreted to apply a broader, more encompassing standard for what areas are jurisdictional under the RHA, I find that the application of the long-standing standards discussed above is more reasonable because of the potential implications of applying a broader standard. My decision on this point avoids implementing a new standard for RHA jurisdiction that arguably could subject many low-lying urban areas across the country that are protected by dikes or other structures, such as areas of the City of New Orleans, to RHA jurisdiction for the first time.

12. In summary, for the reasons set forth above, it is my determination that only those areas within the eastern portion of the Redwood City Salt Plant site shown as double-sided sloughs on the attached map [Attachment 3] are currently subject to jurisdiction under Section 10 of the RHA. The area of the Salt Plant outside of those double-sided sloughs is not subject to RHA jurisdiction.

13. The Corps staff points of contact for this memorandum are David Olson at 202-761-4922 and Max Wilson at 202-761-8544.

Building Strong!

Attachments

JOHN W. PEABODY
Major General, USA
Deputy Commanding General
for Civil and Emergency Operations

List of Attachments

Attachment 1. Letter from David C. Smith, Senior Vice President, DMB Redwood City Saltworks, to Jane Hicks, Division Chief, Regulatory Division, San Francisco District, USACE, and Jason Brush, Manager, Wetlands Office, US EPA Region 9, of May 30, 2012.

Attachment 2. Jo-Ellen Darcy, Assistant Secretary of the Army (Civil Works), Memorandum for the Chief of Engineers, *Subject: Redwood City, California; Direction for Processing Cargill, Inc's Approved Jurisdictional Determination* (November 7, 2014).

Attachment 3. Map, *Approved Jurisdictional Determination; Redwood City Salt Plant* (March 19, 2015).

Attachment 4. Earl Stockdale, Chief Counsel, *Legal Principles to Guide the Approved Jurisdictional Determination for the Redwood City Salt Plant* (January 9, 2014).

Attachment 5. Earl Stockdale, Chief Counsel, *Supplement to "Legal Principles to Guide the Approved Jurisdictional Determination for the Redwood City Salt Plant" 9 January 2014* (March 25, 2014).

Attachment 6. Michael Josselyn, *Attachment A: Analysis of Redwood City Salt Plant Site Elevations and Crystallizer Construction Plan* (August 29, 2012).

Attachment 7. War Department Permit issued to Stauffer Chemical Company, January 16, 1940.

Attachment 8. Calvin Fong, Chief, Regulatory Functions Branch, *Regulatory Functions Bulletin Memorandum: Regulatory Function's Policy on Section 10 Jurisdiction Behind Dikes (Levees)* (May 25, 1983).

Attachment 9. Omaha District GIS Analysis of U.S. Coast and Geodetic Survey Sheet 4643 (undated).

May 30, 2012

Ms. Jane M. Hicks
Division Chief, Regulatory Division
U.S. Army Corps of Engineers
1455 Market Street, 16th Floor
San Francisco, California 94103-1398

Mr. Jason Brush
Manager, Wetlands Office
U.S. Environmental Protection Agency, Region 9
75 Hawthorne Street
San Francisco, California 94105

Re: DMB Redwood City Saltworks Salt Plant, Redwood City, San Mateo County, California

Dear Ms. Hicks and Mr. Brush:

In accordance with U.S. Army Corps of Engineers (Corps) Regulatory Guidance Letter (RGL) 08-02, DMB Redwood City Saltworks (Saltworks)[1] – previously requested, and the Corps issued, a preliminary jurisdictional determination (PJD). The PJD covered approximately 1,365 acres of industrial salt production facilities (effectively, all areas interior to the perimeter levee system, herein referred to as Salt Plant) and approximately 113 acres of adjacent areas in and around Redwood City, San Mateo County, California.[2] Collectively, this 1,478 acres was the PJD area.

That request was made as the Saltworks team was pursuing a particular vision for redevelopment, reuse, and restoration of the Salt Plant with the City of Redwood City. As explained in greater detail below, Saltworks is no longer pursuing that project application and is,

[1] Saltworks is a venture whose principals are DMB Pacific Ventures, LLC and Westpoint Slough, LLC, an affiliate of Cargill, Incorporated. The real property at the Salt Plant is owned by Cargill Point, LLC, an affiliate of Cargill, Incorporated.

[2] Letter from David C. Smith, DMB Redwood City Saltworks, to Jane Hicks, Chief, Regulatory Division, U.S. Army Corps of Engineers (Nov. 12, 2009); Letter from Jane M. Hicks, Chief, Regulatory Division, U.S. Army Corps of Engineers, to David Smith, DMB Redwood City Saltworks (Apr. 14, 2010). The PJD covered both the Salt Plant and the adjacent areas, a total of approximately 1,478 acres.

Attachment 1

instead, contemplating a dramatically reduced development proposal confined to the most historically disturbed portion of the Salt Plant.

In pursuing this revised and reduced proposal, Saltworks now withdraws the PJD. Instead, Saltworks and Cargill now seek a formal, legally binding, and final jurisdictional determination under the Rivers and Harbors Act (RHA) and the Clean Water Act (CWA) for the 1,365 acre Salt Plant. The Corps has the authority to make the RHA jurisdictional determination.[3] We request that the CWA jurisdictional determination be made by the U.S. Environmental Protection Agency (EPA) pursuant to the "Memorandum of Agreement (MOA) between the Department of the Army and the Environmental Protection Agency Concerning the Determination of the Geographic Jurisdiction of the Section 404 Program and the Application of the Exemptions under Section 404(f) of the Clean Water Act" (Jan. 19, 1989) (1989 MOA). Finally, as explained below and in the attached jurisdictional submission, we set forth the reasons why the Salt Plant is not subject to either the RHA or the CWA.

Local Processing of the Proposed Restoration and Reuse of the Saltworks Salt Plant

Well before bringing forward any specific proposal for the restoration and reuse of the Salt Plant, the Corps, EPA, and other agencies strongly encouraged the Saltworks team to engage Redwood City residents and elected officials regarding any proposal for the future of the Salt Plant. We agreed. Both then and now, that foundation of grassroots outreach has been and remains the foundation of the evolving proposal for the Salt Plant.

The initial proposal, filed with the City in May 2009, was the product of nearly two years of outreach and public engagement involving community forums, planning charrettes, and other means of input. The Saltworks team documented over 10,000 comments and suggestions during this period which informed and guided the first project application to the City. Titled the "50/50 Balanced Plan," this application proposed using half of the Salt Plant for development and the other half for open space and restoration uses.

The 50/50 Balanced Plan proposed a transit-oriented, mixed-use community consisting of a maximum of 12,000 residential units; up to 1,000,000 square feet of commercial office uses; 140,000 square feet of neighborhood commercial and personal services uses; over 40 acres devoted to schools including four elementary school sites, a middle school site, and a high school site; community facilities consisting of a branch library, fire station, 4-H club farm and community garden; and approximately 794.5 acres of open space including creation of approximately 476 acres of tidal marsh habitat. Visually, the plan had a prominent crescent configuration that extended across most of the Salt Plant, wrapping around the core restoration area.

[3] 33 U.S.C. § 403; 33 C.F.R. § 329.14(b).

The City conducted extensive study and analysis of the May 2009 proposal. Additionally, during much of 2011, the City carried out an extensive "scoping" process pursuant to, though far exceeding the requirements of, the California Environmental Quality Act. That process included four topical workshops, a planning commission hearing, and a City Council hearing. That process produced hundreds of comments on the proposed plan from Redwood City residents, regional stakeholders, and regulatory agencies.

In light of the tremendous amount of public participation and thoughtful feedback, the Saltworks team began a thorough re-evaluation of the project proposal. In fact, because it was clear that the reconsideration would involve significant revisions to central aspects of the proposed project, the Saltworks team officially notified the City in November 2011 to stop all work on and consideration of the pending 50/50 Balanced Plan application. Ultimately, that application was officially withdrawn from the City in May 2012.[4]

Saltworks has not yet submitted a revised project proposal to the City. However, it has notified the City that the new project proposal will be a dramatic departure from the prior plan. Specifically, all proposed development will be confined to a much smaller footprint, roughly half the disturbance area proposed in the May 2009 project. Further that disturbance area will be limited to and confined within the most historically filled and manipulated area of the Salt Plant. The attached jurisdictional submittal, Attachment B, and the "Early History Report," Exhibit 5 thereto, lay out that disturbance history in detail.

In addition to the development footprint being confined to the area of greatest historic disturbance, it also is wholly contained within the City's "Urban Reserve" designation in its General Plan. The Urban Reserve designation identifies "land to be preserved for future use to *expand the limits of the urbanized area of the City*." Redwood City General Plan, The Built Environment, Urban Form and Land Use, at BE-41 (adopted October 11, 2010) (emphasis added). This much-reduced and consolidated development footprint significantly expands the area and opportunities available for restoration and habitat creation.

Saltworks will not proceed with the PJD.

As you know, RGL 08-02 establishes that a PJD is not a "legally binding determination . . . regarding whether CWA/RHA jurisdiction exists" over a particular location.[5] Rather, it is a tool available at the option of the applicant to "set aside questions regarding CWA/RHA jurisdiction .

[4] Letter from John Paul Bruno, Redwood City Saltworks, to the Honorable Alicia Aguirre, Mayor, City of Redwood City (May 4, 2012) (formally withdrawing the 50/50 Balanced Plan application), included here as Attachment A.

[5] U.S. Army Corps of Engineers, Regulatory Guidance Letter No. 08-02 at 3 (June 26, 2008), *available at* http://www.usace.army.mil/Portals/2/docs/civilworks/RGLS/rgl08-02.pdf.

. ., usually in the interest of allowing the landowner or 'affected party' to move ahead expeditiously to obtain a Corps permit authorization where the party determines that it is in his or her best interest to do so." *Id.* Under RGL 08-02, a PJD may be used "even where initial indications are that the water bodies or wetlands on a *site may not be jurisdictional*," as is the case with the Salt Plant. *Id.* (emphasis added). Moreover, "a recipient of a preliminary JD can . . . request and obtain an approved JD if that later becomes necessary or appropriate during the permit process . . . ." *Id.*

As we noted in our prior letters, Saltworks and Cargill consistently have maintained that the Salt Plant is not subject to federal jurisdiction under either the CWA or the RHA. By the terms of RGL 08-02, a landowner's election to proceed under a PJD is voluntary and subject to rescission at the behest of the landowner. Indeed, the Corps noted in its April 14, 2010 letter issuing the PJD that Saltworks and Cargill could request an approved jurisdictional determination at any time. Accordingly, Saltworks and Cargill no longer elect to proceed with the PJD and now seek a formal, legally binding, final determination of RHA and CWA jurisdiction over the Salt Plant from the regulatory agencies. This determination will assist Saltworks and Cargill in assessing alternative future uses of the Site and in working with State, regional, and local officials as well as other stakeholders.

The Salt Plant is not subject to CWA or RHA jurisdiction.

As explained in the attached submission, Redwood City Approved Jurisdictional Determination Submission (May 30, 2012), Attachment B, the Salt Plant is not subject to federal jurisdiction under either the RHA or the CWA. Major portions of the Salt Plant have been in agricultural and industrial use as early as the 1860s. The present-day Salt Plant was defined and constructed pursuant to a United States War Department permit issued under the RHA in 1940.[6] Although that construction fully and finally severed the entire Salt Plant from San Francisco Bay, the western-most portion of the Salt Plant had a history of disturbance and fill for decades predating that permit.

As to RHA, the Salt Plant is not subject to jurisdiction because it is not subject to the ebb and flow of the tide, and it does not constitute navigable waters capable of transporting interstate or foreign commerce. With the exception of two sloughs–First Slough and Westpoint Slough–the Corps never asserted RHA jurisdiction over the Salt Plant. Indeed, a 1931 Coast and Geodetic Survey Sheet reflects the conversion to fast land of the vast majority of the Salt Plant west of what was First Slough. Today, the entire Salt Plant is surrounded by levees which sever any connection to San Francisco Bay. The 1940 War Department permit authorized the damming

[6] At the time of the 1940 permit, the Corps was part of the United States War Department. The War Department was dissolved in 1949 and the Corps is now part of the United States Department of the Army, a military department within the United States Department of Defense.

and leveeing of First Slough and the construction of levees along Westpoint Slough around the perimeter of the Salt Plant. The effect of these permitted actions was to cut off all remaining tidal flow to the Salt Plant so that the interior areas could be converted to saltmaking operations. In sum, the Corps historically claimed only limited RHA jurisdiction over the Salt Plant, and what jurisdiction it may have had was extinguished by the 1940 permit.

As to CWA, the Salt Plant is not subject to jurisdiction because it was filled and permanently converted into an industrial saltworks facility prior to the passage of the CWA in 1972. The Salt Plant had none of the characteristics of "waters of the United States" at the time the CWA took effect. The long and dynamic history of disturbance and fill of the western-most portion of the Salt Plant is documented in the attached jurisdictional submission with its accompanying Early History Report. Further, with the construction of the levees, the remainder of the Salt Plant was hydrologically separated from San Francisco Bay. Moreover, the Salt Plant today does not constitute "waters of the United States" under Corps and EPA regulations or under controlling CWA case law, including case law from the United States Court of Appeals for the Ninth Circuit.

Saltworks seeks a case-specific CWA jurisdictional determination from EPA.

Because any CWA jurisdictional determination involving the Salt Plant will present important, long-disputed legal and policy issues, and given EPA's extensive involvement with San Francisco Bay salt production facilities over the past decade, Saltworks requests that EPA make a case-specific jurisdictional determination for the Salt Plant pursuant to the 1989 MOA. Under the MOA, EPA can make a final determination of the jurisdictional scope of waters of the United States where significant issues are anticipated and where clarifying guidance is likely to be needed. Those circumstances exist here.

The CWA jurisdictional status of Cargill's saltmaking operations around the Bay has been the subject of repeated litigation over the past 40 years.[7] But none of the cases have addressed or resolved the issue of jurisdiction at the Salt Plant. Here, the determination of jurisdiction will necessarily require resolution of numerous important policy and legal issues, such as:

- The legal effect of the lawful conversion of the entire Salt Plant to fast land under a 1940 RHA permit prior to enactment of the CWA;

- Whether brines that are intermediate industrial products and that, when discharged into "waters of the United States" are regulated by EPA as statutory "pollutants" under the CWA, can also be "waters of the United States;" and

[7] From 1971 to 2007, there were at least 18 cases addressing the jurisdictional status of the various Cargill saltmaking operations around the Bay.

- The application of CWA jurisdiction, if any, to an isolated site following *Solid Waste Agency of Northern Cook Cnty. v. U.S. Army Corps of Eng'rs*, 531 U.S. 159 (2001), and *Rapanos v. United States*, 547 U.S. 715 (2006).

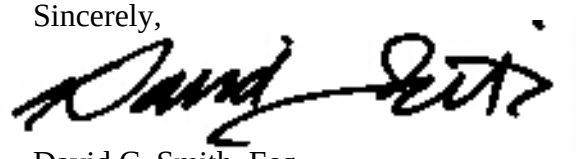
Further, principles of economy and efficiency warrant EPA's involvement on the front end of this analysis. We are certainly aware of and sympathetic regarding the significant workload shouldered at EPA Region IX by just a few professionals in the Water Division. But given the history of disagreement regarding this and other Cargill facilities in San Francisco Bay, involvement by EPA seems inevitable. Up-front involvement and direction from the ultimate authority on CWA issues would certainly appear to be in all parties' interest.

Moreover, EPA has a long history of involvement with the CWA jurisdictional questions related to Cargill's saltmaking facilities, including at the Napa Plant Site. EPA is thoroughly familiar with saltmaking operations, including in particular the Redwood City Salt Plant. Indeed, EPA was a critical player in the 2003 sale and donation of 16,500 acres of Cargill saltmaking facilities around San Francisco Bay, which specifically involved, but did not resolve, the jurisdictional status of the Salt Plant. Accordingly, given the history and questions presented by the Redwood City Salt Plant, EPA should make a case-specific CWA jurisdictional determination.

Conclusion

The Saltworks team has been exploring potential future uses for the Salt Plant since 2006. The significant amount of public engagement – both in support and opposition – testify to the pivotal importance of this Salt Plant. Its size, location, and characteristics afford an unparalleled opportunity for impacting both the region's dire lack of housing as well as providing both the land and financial resources to accomplish substantial wetlands restoration. The varied and extensive history of disturbance and fill at the Salt Plant warrant a thoughtful consideration of all the dynamics this Salt Plant presents. We look forward to working with you as you complete the Salt Plant's jurisdictional determination. Please contact me if you have any questions regarding our request or the information contained in or attached to it. Thank you very much for your prompt attention to this important matter.

Sincerely,



David C. Smith, Esq.
Senior Vice President
DMB Redwood City Saltworks

cc: Melissa Scianni, EPA Region IX
Hugh Barroll, EPA Region IX
Katerina Galactos, EPA Region IX
Cameron Johnson, USACE, San Francisco District
Blake Lyon, Senior Planner, City of Redwood City
Pamela Thompson, City Attorney, City of Redwood City

Attachments

DEPARTMENT OF THE ARMY
OFFICE OF THE ASSISTANT SECRETARY
CIVIL WORKS
108 ARMY PENTAGON
WASHINGTON DC 20310-0108

NOV - 7 2014

MEMORANDUM FOR THE CHIEF OF ENGINEERS

SUBJECT: Redwood City, California; Direction for Processing Cargill, Inc.'s Approved Jurisdictional Determination

1. On 12 November 2009, Cargill, Inc. requested a preliminary jurisdictional determination (PJD) for a piece of property known as the Redwood City site. Six months later, on 14 April 2010, the San Francisco District of the U.S. Army Corps of Engineers (Corps) issued a PJD that presumed Clean Water Act and Rivers and Harbors Act jurisdiction over the Redwood City site. Cargill then chose to withdraw the PJD and requested an approved jurisdictional determination ("AJD"). A "vertical team," composed of Corps employees from the San Francisco District, South Pacific Division, and Headquarters, worked on the AJD, resulting in the issuance of two Chief Counsel legal opinions and eventually a draft AJD. In May 2014, I requested that you delay the issuance of the AJD while I directed a review of the Redwood City jurisdictional determination process by my staff and the Army Deputy General Counsel. Our review has been completed and this memorandum is intended to inform you of the conclusions reached and my decision on the way ahead.

2. I want to be very clear that this review has only considered the procedural aspects of the determination and did not in any way consider the substantive question of whether the property in question is in fact jurisdictional. Nor did it consider the substantive merits of any of the legal theories advanced throughout the process.

3. Based on a careful review of all the facts, it is clear that the process established to reach the Redwood City draft AJD was flawed. However, because the AJD was not signed, I am informed that no law or regulation was violated. The facts are convincing: the use of the "vertical team" process and the issuance of the two legal opinions unmistakably took away the District Engineer's authority to make an independent decision on whether to sign the Redwood City AJD. Even if one were to debate this conclusion, the legal vulnerabilities this process created for the government and the applicant are undeniable.

4. Based on these conclusions and per our discussion today, the actions listed below should be implemented immediately:

Attachment 2

SUBJECT: Redwood City, California, Direction for Processing Cargill, Inc.'s Approved Jurisdictional Determination

a. Cargill's request for an AJD will be decided at the Headquarters, U.S. Army Corps of Engineers, consistent with 33 C.F.R. § 325.8. The AJD will be signed by you or your designee, who must be either a GO or SES, as soon as practicable, and in no case later than sixty days after the date of this memorandum.

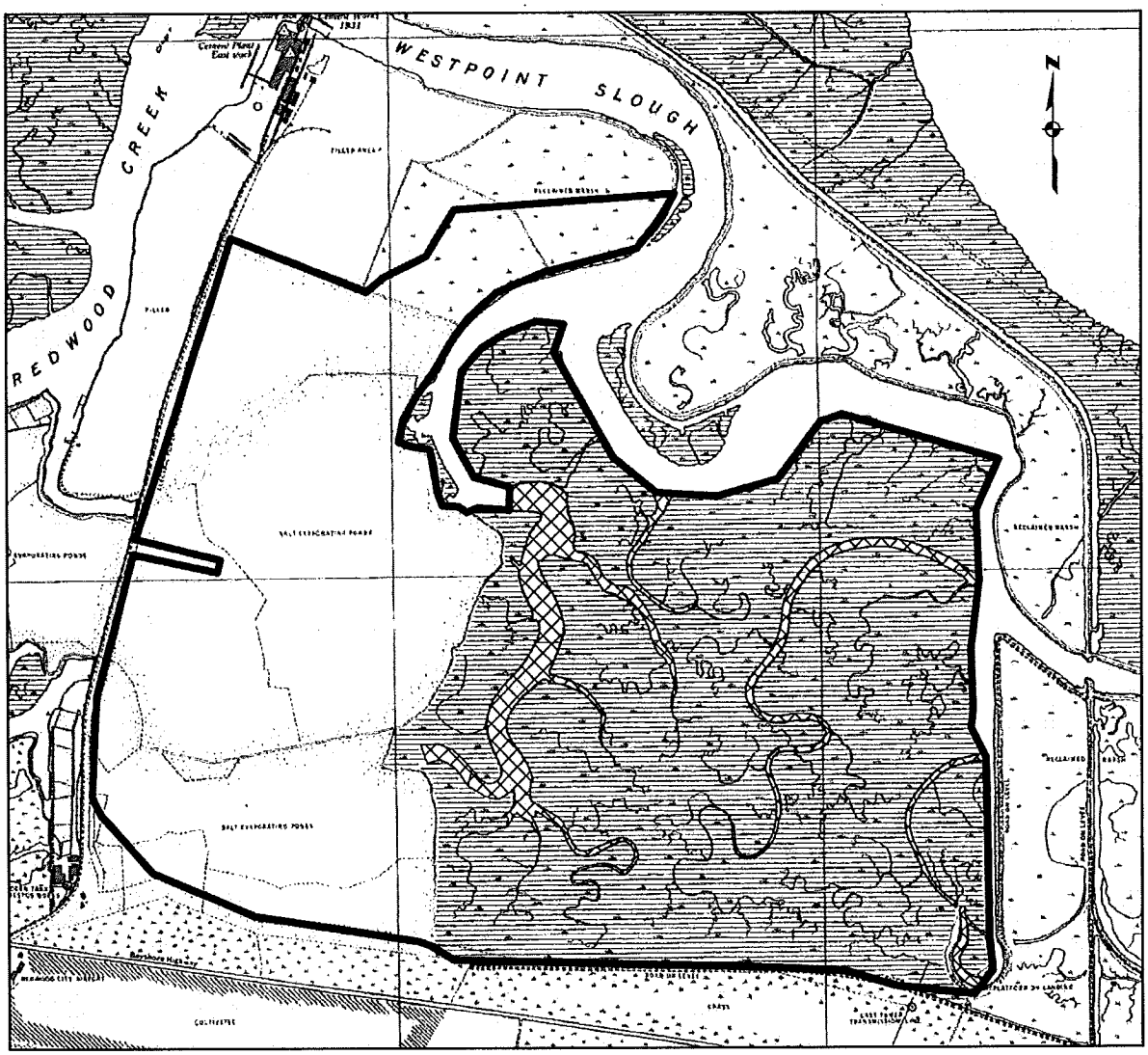
b. Prior to any augmentation of the administrative record supporting this jurisdictional determination, your staff, under the direction of the Acting Chief Counsel, will initiate discussions with the Headquarters, U.S. Environmental Protection Agency (EPA) and the Department of Justice to address any concerns regarding the defensibility of the legal underpinnings supporting the final AJD, and hopefully reach agreement with EPA regarding the extent of Clean Water Act jurisdiction, if any, associated with the Cargill property in question. These discussions will not change the statutory criteria on which the AJD will be based, and the Corps will still make the ultimate decision on whether to find jurisdiction, absent EPA invoking its "special case" authority.

c. Lastly, consistent with 33 C.F.R. § 331.3(a) (3), any authorized appeal of this AJD will be made directly to this office.

Jo-Ellen Darcy
Assistant Secretary of the Army
(Civil Works)

Approved Jurisdictional Determination under the Rivers and Harbors Act of 1899
Redwood City Salt Plant
Located north of U.S. 101 and east of Seaport Boulevard, Redwood City, San Mateo County, California

Sheet 1 of 1 Date: March 19, 2015



Legend

Redwood City Salt Plant Project Site

Double Sided Sloughs

0 0.25 0.5 Miles

Attachment 3: Redwood City Salt Plant project site mapped on U.S. Coast and Geodetic Survey T-sheet 4643, Redwood City, San Mateo County, California. Area below mean high water within double-sided sloughs is approximately 56.87 acres. Area below mean high water within double-sided sloughs is jurisdictional pursuant to Section 10 of the Rivers and Harbors Act of 1899.

Legal Principles to Guide the Approved Jurisdictional Determination for the Redwood City Salt Plant

CECC-ZA 9 January 2014

Introduction and Summary of Conclusions

For more than a century, private industry has been conducting salt making operations in the San Francisco Bay area. Because the salt making facilities are constructed at sites in or near tidal waters, there has been ongoing interest in the Corps' authority to exercise jurisdiction over these sites under Section 10 of the Rivers and Harbors Act of 1899 (RHA) and Section 404 of the Clean Water Act (CWA). Most recently, this interest has focused on the Redwood City salt plant, which is a part of Cargill's larger salt making operations in the Bay area.

DMB Redwood City Saltworks, the entity that represents Cargill and the potential developer of the site, has recently requested an approved jurisdictional determination for the 1,365 acre salt plant facility in Redwood City, CA. Because of this request, the Corps must examine the relevant laws and regulations as interpreted by the courts to identify the legal standards applicable to a jurisdictional determination for the site.

On several occasions the Corps and the courts have addressed the question of jurisdiction over other property in the Bay area owned by Cargill and used for salt making operations. The decisions reached on those occasions have involved different facts and have been made against a backdrop of evolving jurisprudence regarding the extent of the Corps' regulatory jurisdiction under the RHA and CWA. While the Corps' understanding of RHA jurisdiction has not changed substantially in recent years, the Supreme Court has issued several landmark decisions addressing CWA jurisdiction since the last time a court has considered the issue as it relates to a salt making operation on the San Francisco Bay.

Relying on binding precedents of the Supreme Court and the Court of Appeals for the Ninth Circuit, this document sets forth the legal standards that must be applied in determining RHA and CWA jurisdiction over the site of the Redwood City salt plant. It explains that the government's RHA jurisdiction in tidal waters extends shoreward to the mean high water (MHW) mark in its unobstructed, natural state. It concludes that the Cargill Redwood City property should be divided into two parcels for analytical purposes, one developed before 1940 and the other developed after 1940. There is no evidence in the record to suggest that the

Attachment 4

Army ever exerted RHA jurisdiction over the parcel developed before 1940; the parcel was either never subject to RHA jurisdiction or RHA jurisdiction has been surrendered. The other parcel was developed pursuant to a 1940 War Department permit, and the Army retains RHA jurisdiction up to the MHW mark as it existed immediately prior to the construction of levees and a dyke authorized in this permit. The 1940 War Department permit authorizing the levees and dyke should be given deference when determining the historic location of the MHW mark. Finally, this document concludes that the liquids on both parcels, which have been subject to several years of industrial salt making processes, are not "waters of the United States" subject to CWA jurisdiction.

Discussion

Factual Setting[1]

As previously mentioned, a significant portion of the southern San Francisco Bay shoreline has been used for the production of salt through a process called solar evaporation. The Redwood City Saltworks site is comprised of approximately 1,365 acres that currently and/or historically have been used to make salt. The development of the Redwood City site can be described as having occurred on two distinct parcels in two phases, one of which involved a War Department permit issued in 1940 to a former owner, the Stauffer Chemical Company.[2] The two parcels are highlighted in different colors on the attached map.[3]

Parcel 1: The first phase of development occurred prior to 1940 and involved the western portion of the site, roughly between the historic location of First Slough and the current location of Seaport Boulevard. This portion of the site is identified in green on the attached map. It is bounded by a railroad line on the west, Bayshore Highway on the south, an existing levee on the east, and Westpoint Slough on the north. In 1940, it was shown as containing "Salt Evaporating Ponds," "Reclaimed Marsh," and a cement works.[4] This area approximately corresponds to the area that Cargill calls its crystallizer complex.[5]

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[1] The information presented in this section explains the context of the discussion of controlling legal standards and is based on the applicant's submission, information conveyed during site visits, and other sources. A formal determination of the physical characteristics of the site will be undertaken by the San Francisco District of the U.S. Army Corps of Engineers during the processing of the request for an approved jurisdictional determination.

[2] War Department Permit issued to Stauffer Chemical Company, January 16, 1940. The permit includes a diagram of the levee and dyke profiles in relation to the surrounding topography marked "Sheet 1" and a map of the site marked "Sheet 2." These documents together will be collectively referred to as "the permit" or "1940 permit."

[3] The attached map is a copy of the map that accompanied the 1940 permit and was identified as "Sheet 2" of that permit. The color highlighting has been added.

[4] War Department Permit issued to Stauffer Chemical Company, January 16, 1940 (Sheet 2); see also Attachment C to Exhibit 7 of the Redwood City Salt Plant Approved Jurisdictional Determination Submission (May 30, 2012).

[5] See Exhibit 2 of the Redwood City Salt Plant Approved Jurisdictional Determination Submission (May 30, 2012).

Parcel 2: The second phase of development occurred after 1940, immediately east of the first phase of development. The parcel where this development occurred is shown in red on the attached map. The development was undertaken pursuant to a War Department permit authorizing construction of "an earth dyke or levee across and along the bank of First Slough, and along the banks of Westpoint Slough and an unnamed tributary thereof" to enclose an area immediately east of the first development.[6] This area was leveed off from the Bay and developed into a complex of containment cells for salt production. The parcel is bordered on the west by the existing levee that forms the eastern border of the area developed prior to 1940, except that this common border diverges at the "Location of the Proposed Dam" across First Slough. From that point, the western border of the parcel follows the eastern shore of First Slough north, where the proposed levee or dyke is shown as a darker line. The northern border of the parcel follows this dark line along the southern shore of Westpoint Slough, and the eastern border follows the same darker line along the western shore of the unnamed tributary to Westpoint Slough. The southern border is the darker line that generally parallels the "Road on Levee." It approximately corresponds to the area Cargill calls its pickle and bittern complexes.[7]

The Redwood City salt plant entails only the later stages of the salt production process.[8] The initial stages of the process are conducted on other parcels, where the process begins by pumping raw Bay water into a leveed evaporation pond. The water is moved through a series of containment cells as the salinity increases. After approximately four years of subjecting the water to solar evaporation at other locations, the resulting liquid ("pickle") is transferred to the pickle complex at the Redwood City facility. Additional solar evaporation occurs there until the solution is saturated, at which point the pickle is moved into the crystallizer cells where the salt precipitates out of suspension. The resulting liquid, called "bittern," is pumped into the bittern complex cells, where it is stored until moved off site to be sold or recycled back into the salt production process. The salt that remains on the floor of the crystallizer cells is then mechanically scraped from the dry ground and loaded into trucks to be moved offsite.

Rivers and Harbors Act of 1899

Overview

Congress enacted the RHA to protect the navigable capacity of tidal and non-tidal waters. RHA jurisdiction is closely connected to the Federal navigation servitude, which reaches to the limits of navigable waters and permits the sovereign to prevent or remove

[6] War Department Permit issued to Stauffer Chemical Company, January 16, 1940.
[7] *Id.*
[8] This description is based on the Redwood City Salt Plant Approved Jurisdictional Determination Submission (May 30, 2012).

obstructions to navigation without compensation. This document explains that RHA jurisdiction extends to the MHW mark, which ordinarily is determined by identifying a line on the shore based on the average high tides over a period of years. This line can be ambulatory and special rules may apply to account for forces of nature, which may cause a shoreline to increase or decrease, or manmade improvements that counter these forces. Even where jurisdiction may normally attach, it may be surrendered by the government. Applying these legal precepts is necessary to determine the limits of RHA jurisdiction over Cargill's Redwood City property.

Geographic Scope of RHA Jurisdiction

The RHA regulates obstructions to the navigable capacity of any "navigable water of the United States."[9]

> [It] prohibits the creation of 'any obstruction not affirmatively authorized by Congress[] to the navigable capacity of any of the waters of the United States' [and] . . . make[s] it unlawful to 'build or commence the building of any wharf, pier, dolphin, boom, weir, breakwater, bulkhead, jetty, or other structures in any port, roadstead, haven, harbor, canal, navigable river, or other water of the United States . . . except on plans recommended by the Chief of Engineers and authorized by the Secretary of the Army' or to 'excavate or fill, or in any manner to alter or modify the course, location, condition, or capacity of . . . the channel of any navigable water of the United States, unless the work has been recommended by the Chief of Engineers and authorized by the Secretary of the Army prior to beginning the same.'[10]

Citing Supreme Court precedents, the Ninth Circuit has recognized that:

> The term "navigable waters" has been judicially defined to cover: (1) nontidal waters which were navigable in the past or which could be made navigable in fact by "reasonable improvements," *United States v. Appalachian Electric Power Co.*, 311 U.S. 377 (1940); *Economy Light & Power Co. v. United States*, 256 U.S. 113 (1921); and (2) waters within the ebb and flow of the tide. *The Propeller Genesee Chief v. Fitzhugh*, 53 U.S. 443 (1851); *United States v. Stoeco Homes, Inc.*, 498 F.2d 597 (3d Cir. 1974), cert. denied, 420 U.S. 927.[11]

With respect to tidal waters, the Supreme Court has held that the term "navigable waters" as used in the RHA, extends to all places covered by the ebb and flow of the tide to the MHW

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[9] 33 U.S.C. § 403.

[10] *U.S. v. Milner*, 583 F.3d 1174, 1191 (9th Cir. 2009) (quoting 33 U.S.C. § 403).

[11] *Leslie Salt Co. v. Froehlke*, 578 F.2d 742, 753 (9th Cir. 1978) (hereinafter "*Froehlke*"). This is consistent with the general definition of "navigable waters of the United States" codified in regulation at 33 C.F.R. § 329.4.

mark.[12] This regulatory authority "is not dependent upon the depth and shallowness of the water," and includes "[m]arshlands and similar areas" that are "subject to inundation by the mean high waters."[13] The MHW mark is determined by where on the shore the average of all high tides reaches over a period of 18.6 years.[14]

RHA jurisdiction is coextensive with the reach of the federal navigation servitude.[15] The navigation servitude,

> sometimes referred to as a "dominant servitude," . . . or a "superior navigation easement," . . . is the privilege to appropriate without compensation which attaches to the exercise of the "power of the government to control and regulate navigable waters in the interest of commerce." *United States v. Commodore Park*, 324 U.S. 386, 390, 65 S.Ct. 803, 89 L.Ed. 1017.[16]

The limits of RHA jurisdiction and the navigation servitude are coextensive because their origins are grounded in the same desired purpose of preserving the navigable capacity of waterways.

In summary, the general rule in tidal areas is that RHA jurisdiction extends to the line on the shore reached by the plane of the mean high water averaged over a period of 18.6 years. This general rule applies when there is a relatively static, natural shoreline. But shorelines may not remain static. Oceans may rise, tides may wash away beaches, and humans may build bulkheads on the shore. If the shoreline has changed or has otherwise been altered, additional analysis must be undertaken to determine if the extent of jurisdiction has changed along with the changes to the shoreline, or if the extent of jurisdiction remains fixed at the MHW mark as it existed before the changes. If there have been changes in the shoreline, jurisdiction is either ambulatory, following the changes in the shoreline, or indelible, remaining fixed despite the changes.

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[12] *Borax,* 296 U.S. at 26-27. See 33 C.F.R. § 329.12(a)(2), which was changed in a rulemaking in 1982 in response to the *Froehlke* decision to eliminate the sentence that established the shoreward limit of navigable waters on the Pacific coast as the mean higher high waters. This regulatory change made the shoreward limit of jurisdiction for all coastal waters (Atlantic and Pacific) the same – the mean high water mark. 47 Fed. Reg. 31794, 31797-98 (July 22, 1982).

[13] See *Greenleaf-Johnson Lumber Co. v. Garrison*, 237 U.S. 251, 263 (1915) and 33 C.F.R. § 329.12(b).

[14] *Borax Consolidated v. City of Los Angeles*, 296 U.S. 10, 26-27 (1935); *Frohlke*, 578 F.2d at 746.

[15] *Froehlke*, 578 F.2d. at 748-750, 752 ("The navigational servitude reaches to the shoreward limit of navigable waters.").

[16] *U.S. v. Virginia Electric Co.*, 365 U.S. 624, 327-28 (1961) (quoted in *Froehlke*, 578 F.2d at 752).

Ambulatory Nature of Jurisdiction

The scope and extent of RHA jurisdiction is ambulatory when there are gradual, lasting shifts in the volume of the water body or the character of the banks or shoreline.[17] In such cases, jurisdiction changes to follow the changing path and extent of the water:

> It is the established rule that a riparian proprietor of land bounded by a stream, the banks of which are changed by the gradual and imperceptible process of accretion or erosion, continues to hold the stream as his boundary; if his land is increased, he is not accountable for the gain, and if it is diminished he has no recourse for the loss. But where a stream suddenly and perceptibly abandons its old channel, the title is not affected, and the boundary remains at the former line.[18]

The Supreme Court has described how Federal regulatory authority shifts to follow the course of a water body as it moves over time, just as title follows the course of a water body as it moves over time:

> Nor is the authority of Congress limited to so much of the water of the river as flows over the bed of forty years ago. The alterations produced in the course of years by the action of the water do not restrict the exercise of Federal control in the regulation of commerce. Its bed may vary and its banks may change, but the Federal power remains paramount over the stream, and this control may not be defeated by the action of the state in restricting the public right of navigation within the river's ancient lines. The public right of navigation follows the stream and the authority of Congress goes with it.[19]

Thus, the contours of RHA jurisdiction change when the physical changes to the course or shoreline of a water body are gradual and long-lasting.[20] If the changes to the course or shoreline are sudden and perceptible due to avulsion[21] or man-made improvements, then the principle of indelible navigability applies to fix the previous limits of jurisdiction despite the changes as discussed further below.

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[17] *Jefferis v. East Omaha Land Co.*, 134 U.S. 178, 189 (1890) (cited in *Milner*, 583 F.3d at 1187).

[18] *Philadelphia Co. v. Stimson*, 223 U.S. 605, 624 (1912). See also *Oklahoma v. Texas*, 260 U.S. 606 (1923); *Hughes v. Washington*, 389 U.S. 290 (1967).

[19] *Philadelphia Co. v. Stimson*, 223 U.S. at 634-35.

[20] *State of Cal. ex rel. State Lands Commission v. U.S.*, 805 F.2d 857, 864 (1986) ("When a water line that constitutes a property boundary changes gradually and imperceptibly by the gradual deposit of solid material on its shore (accretion) or by gradual recession (reliction), the property boundary changes with it. . . . In such a situation, title is "ambulatory.").

[21] *Id.* at 864 ("where a water line changes violently and visibly, i.e., by avulsion, the property boundary does not change with the water but remains where it was prior to the change").

The Principle of Indelible Navigability

The principle of indelible navigability holds that sudden or man-made changes to a water body or its navigable capacity do not alter the extent of RHA jurisdiction, and thus the area occupied or formerly occupied by that water body will always be subject to RHA jurisdiction. This principle was discussed and relied upon by the Supreme Court in *Economy Light & Power*,[22] and has been incorporated in the Corps' definition of "navigable waters of the United States:" "A determination of navigability, once made, applies laterally over the entire surface of the water body, and is not extinguished by later actions or events which may impede or destroy navigable capacity."[23] The rule is expanded upon in 33 C.F.R. §§ 329.9 and 329.13: "an area will remain 'navigable in law,' even though no longer covered with water, whenever the change has occurred suddenly, or was caused by artificial forces intended to produce that change."[24] These regulatory definitions implementing the rule of indelible navigability have been unchanged since September 9, 1972.[25]

The Ninth Circuit decision in *Froehlke* embraced the rule of indelible navigability. The court reversed the lower court decision that "the Corps's jurisdiction under the River and Harbors Act includes all areas within the former line of MHHW in its unobstructed, natural state" and instead ruled that jurisdiction is to be fixed at the former line of MHW its unobstructed, natural state.[26] The opinion cited to "the principle in *Willink* . . . that one who develops areas below the MHW line does do at his peril" as dictating this result.[27] Thus, while RHA jurisdiction "extend[s] to all places covered by the ebb and flow of the tide to the mean high water (MHW) mark in its unobstructed, natural state," where the natural state has been obstructed by a sudden change or an artificial change intended to produce that result, the former mean high water line as it existed before the obstruction becomes the fixed limit of RHA jurisdiction.[28]

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[22] *Economy Light & Power Co. v. U.S.*, 256 US 113, 118 (1921) ("The fact . . . that artificial obstructions [to navigation] exist capable of being abated by due exercise of the public authority, does not prevent the [water body] from being regarded as navigable in law, if, supposing them to be abated, it be navigable in fact in its natural state. The authority of Congress to prohibit added obstructions is not taken away by the fact that it has omitted to take action in previous cases.")

[23] 33 C.F.R. § 329.4.

[24] 33 C.F.R. § 329.13.

[25] 37 Fed. Reg. 18289-92 (Sept. 9, 1972).

[26] *Froehlke*, 578 at 753.

[27] *Id.*

[28] *Id.*; 33 C.F.R. § 329.13. The principle of indelible navigability does not apply when natural changes that come about slowly due to accretion or reliction alter the course or limits of a water body. In such cases, "[t]he public right of navigation follows the stream . . . and the authority of Congress goes with it." *Philadelphia v. Stimson*, 223 U.S. 605, 634-635 (1912).

The Ninth Circuit issued a decision after its *Froehlke* decision that also addressed the effect of levees on RHA jurisdiction. The decision in *Milner* considered whether a shore defense structure that was constructed in uplands beyond RHA jurisdiction could become jurisdictional if gradual erosion caused the shoreline to move to intersect the previously constructed shore defense structure, such that the structure was now located in jurisdictional waters. The court found that such shore defense structures were subject to RHA jurisdiction, but did not determine how to fix the limits of RHA jurisdiction. Unlike the shore defense structures under consideration in *Milner*, the levees before us at the Cargill Redwood City site were permitted, water is not passing through or over them, erosion is not a factor, and there is no indication that the levees are in any way obstructing navigation.[29] *Milner* did not change the rule in *Frohlke* and is not applicable to circumstances at the Redwood City site.

Thus, under current Ninth Circuit jurisprudence, RHA jurisdiction in the San Francisco Bay area generally applies "to all places covered by the ebb and flow of the tide to the mean high water (MHW) mark in its unobstructed, natural state."[30] The Federal regulations implementing the RHA are consistent with this rule of law and define the jurisdictional scope of the RHA statute to be fixed if "later actions or events [such as the construction of a levee or other improvement] . . . impede or destroy navigable capacity."[31]

Surrender of Jurisdiction

Several courts have added nuance to the principle of indelible navigability, specifically by introducing the concept of surrender of jurisdiction. The Third Circuit introduced the concept of surrender of jurisdiction in the case of *United States v. Stoeco Homes, Inc.*, which concerned the jurisdictional status of a parcel of land that had previously been a salt marsh subject to the ebb and flow of the tide, some areas of which had been filled to form fast land several decades earlier.[32] At the time the land at issue in *Stoeco* was filled, it was behind established harbor lines and it was Corps policy not to require any RHA permits for filling shoreward of established bulkhead lines.[33] The question before the court in *Stoeco* was whether blanket permission to fill behind established bulkhead lines could lead to the

[29] If there was any obstruction of navigation, the Corps could protect the navigable capacity of the waters by invoking subsection (f) of the 1940 permit.
[30] *Froehlke*, 578 F.2d at 753.
[31] "A determination of navigability, once made, applies laterally over the entire surface of the water body, and is not extinguished by later actions or events which may impede or destroy navigable capacity." 33 C.F.R. § 329.4. The rule is expanded upon in sections 329.9 and 329.13 of the regulations: "an area will remain 'navigable in law,' even though no longer covered with water, whenever the change has occurred suddenly, or was caused by artificial forces intended to produce that change." 33 C.F.R. § 329.13.
[32] *U.S. v. Stoeco Homes, Inc,*. 498 F.2d 597, 600 (3rd Cir. 1974).
[33] *Id.* at 602-603.

permanent loss of RHA jurisdiction if the land was "improved" while the permission was in effect.[34] The Third Circuit looked at the statutory language and found:

> Section 10 by its plain language contemplates congressional consent to some encroachments on the navigational servitude, and delegates to the Army Corps of Engineers and the Secretary of the Army authority to grant such consent on its behalf. If the administrative agency gives an express consent by permit in a specific instance, with no reservation of the right to compel removal, surely that consent must be considered to be a surrender of the federal servitude over the fee in question.[35]

In *Stoeco*, the "improved" land was made fast by filling "substantially above mean high tide,"[36] and the court expressly limited the holding finding surrender "to tidal marshlands which had become fast land" during the time that the filling of those waters was permitted without restriction or reservation.[37] However, the fact that the improvement that resulted in a finding of surrender in this case was making the land fast does not mean that this is the only way a surrender could occur through improvement or modification of jurisdictional waters.

In *Froehlke*, the Ninth Circuit suggested that the concept of surrender could apply in the San Francisco Bay, as well. In evaluating the scope of RHA and CWA jurisdiction over salt plants within the Bay, the Ninth Circuit held that "in tidal areas, 'navigable waters of the United States,' as used in the Rivers and Harbors Act, extend to all places covered by the ebb and flow of the tide to the mean high water (MHW) mark in its unobstructed, natural state."[38] However, the court continued:

> Our holding that the MHW line is to be fixed in accordance with its natural, unobstructed state is dictated by the principle recognized in *Willink*, supra, that one who develops areas below the MHW line does so at his peril. We recognize that under this holding issues of whether the Government's power may be surrendered or its exercise estopped, and if so, under what circumstances and to what extent, may arise. Leslie, for example, may contend that there has been a surrender by the Corps of its

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[34] The three-part inquiry that the Third Circuit made to determine whether RHA jurisdiction was surrendered in *Stoeco* included "whether Congress intended that §10 was intended [sic] to have continuing application to *improved* land formerly within the navigable waters of the United States." *Stoeco*, 498 F.2d at 608 (emphasis added). "Improve" is defined by Webster's as, inter alia, "to augment or enhance in value or good quality; to make more profitable, excellent, or desirable;" and "to enhance in value by bringing under cultivation or reclaiming for agriculture or stock raising." *Webster's New International Dictionary of the English Language*, Second Edition, Unabridged, 1939.

[35] *Stoeco*, 498 F.2d at 610.

[36] *Id.* at 600.

[37] *Id.* at 611.

[38] *Froehlke*, 578 F.2d at 754.

> power under the Rivers and Harbors Act with respect to certain land below the MHW line.[39]

The court also observed that "at this time it is not necessary for us to pass on issues such as were before the court in *Stoeco*."[40] Thus, the Ninth Circuit recognized that it may be possible that the United States could surrender jurisdiction, but the court did not rule on this point.

Surrender Applied to the Redwood City Salt Plant

In the case of the Redwood City salt plant, separate surrender analyses are necessary for the two parcels described above because of their distinctive histories.

The western portion of the site (parcel 1, shown in green on the attached map) was already improved for salt-making purposes at the time the January 16, 1940, War Department permit was issued. The map accompanying the 1940 War Department permit shows this parcel as "Salt Evaporating Ponds" and "Reclaimed Marsh," and identifies the location of the existing levee surrounding those areas.[41] There is no evidence that the Corps ever asserted jurisdiction over this area or the construction of the levees on this parcel.[42] Given the acquiescence of the Corps to the improvement of the western portion of the site prior to 1940, either the property was never subject to RHA jurisdiction or RHA jurisdiction has been surrendered.[43]

The analysis is different for the eastern portion of the site (parcel 2, shown in red on the attached map), which was leveed off from the San Francisco Bay pursuant to the 1940 War Department permit. Here, the question of whether the Corps retains RHA jurisdiction over formerly tidal waters is principally informed by the terms of the permit. The permit authorized the Stauffer Chemical Company, Cargill's predecessor in interest, to:

> construct an earth dyke or levee across and along the bank of First Slough, and along the banks of Westpoint Slough and an unnamed tributary thereof, in Westpoint Slough at about 1.0 mile southeasterly of the mouth of Redwood Creek, San Mateo County,

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[39] *Id.* at 753.

[40] *Id.*

[41] Aerial photographs submitted by the applicant show the levees depicted on the 1940 permit existed in the same configuration in 1930. See Attachment C to Exhibit 7 of the Redwood City Salt Plant Approved Jurisdictional Determination Submission (May 30, 2012).

[42] This is consistent with the Corps practice immediately following the passage of the RHA of only regulating areas and activities that would have a relatively direct impact on the navigable capacity of navigable waters. See *Stoeco*, 498 F.2d at 606.

[43] *Stoeco* holds that the "long-standing administrative practice" not to require explicit or specific permission to fill behind harbor lines prior to 1970 was sufficient consent to surrender the navigation servitude. Similarly, the administrative practice of only regulating activities that would have a relatively direct impact on the navigable capacity of waters at the turn of the last century may also be sufficient to surrender the navigation servitude where navigable waters were filled or otherwise developed with the acquiescence of the Federal government during that period.

> California, in accordance with the plans shown on the drawing attached hereto marked "Proposed Dam and Levee East of Redwood Cr., San Mateo County, California, Application by Stauffer Chemical Co., Dated Dec. 1939."[44]

The permit also contains a number of conditions that are designed to protect the navigable capacity of the named waters. It is accompanied by a map (Sheet 2) and a diagram (Sheet 1), which depicts certain features of the site and elevation data. Reading these documents together, it is clear that the Army was exercising its jurisdiction under the RHA when it sought to regulate the construction of these improvements under the permit.

The permit also contains an express reservation that allows the United States to force the removal of any of the permitted work:

> That if future operations by the United States require an alteration in the position of the structure or work herein authorized, or if, in the opinion of the Secretary of War, it shall cause unreasonable obstruction to the free navigation of said water, the owner will be required, upon due notice from the Secretary of War, to remove or alter the structural work or obstruction caused thereby without expense to the United States, so as to render navigation reasonably free, easy, and unobstructed.[45]

This condition would seem to be exactly the type of "reservation of the right to compel removal" that the Third Circuit indicated could prevent surrender of jurisdiction.[46] While this reservation has limitations regarding when the Corps can order removal of permitted fill, the fact that there is *any* reservation is sufficient to put the landowner on notice that "one who develops areas below MHW does so at his own peril"[47] and thus prevents a surrender of jurisdiction. Because there is no surrender, the areas previously below the MHW mark continue to be regulated under the RHA.

On this basis, surrender has not been triggered and the rule of indelible navigability applies to the eastern portion of the site. Accordingly, any areas that were RHA jurisdictional waters when the levees were permitted in 1940 are still jurisdictional under the RHA.

Determining the Extent of RHA Jurisdiction

With these legal rules in mind, the San Francisco District should expeditiously finalize the jurisdictional determination for the Redwood City salt plant site. Consistent with the

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[44] War Department Permit issued to Stauffer Chemical Company, January 16, 1940.
[45] Condition (f) of the January 16, 1940 War Department permit.
[46] See *Stoeco*, 498 F.2d at 610.
[47] *Froelke*, 578 F.2d at 753

foregoing discussion, the determination should include different findings for the two parcels comprising the site.

For the western portion of the site (parcel 1, highlighted in green on the attached map), RHA jurisdiction does not attach. There is no evidence that the Army ever asserted jurisdiction over this area or the construction that took place on this parcel. Either the property was never subject to RHA jurisdiction or RHA jurisdiction has been surrendered. No further analysis is required for this parcel.

For the eastern portion of the site (parcel 2, highlighted in red on the attached map), which is bordered by the levees that were authorized by the 1940 permit and which includes the area behind the dyke on First Slough, jurisdiction has not been surrendered and is retained by the rule of indelible navigability. For this area, the scope of RHA jurisdiction was fixed at the time the levees were constructed. Accordingly, the District must determine what areas of the parcel, if any, were below the MHW mark at the time the levees were constructed.

In making this determination, the District must take into account the information contained in the 1940 permit and accompanying attachments. These documents reflect the understanding of the parties at the time the permit was issued and should be accepted as the best available evidence of the locations of the features of the site, the elevations of the levees and dyke to be constructed, and the resources warranting protection. The permit identifies three of the more substantial features, First Slough, Westpoint Slough, and an unnamed tributary thereof, in specifying the location of the levees to be constructed.[48] The terms of the permit indicate that these were the waters that the terms and conditions were intended to protect. The diagram accompanying the permit (Sheet 1) shows that the base of the dyke that was constructed across First Slough was below the MHW mark. It also shows that the other levees on the site were to be constructed on marshlands at locations near the above named waters at elevations generally equal to the mean higher high water mark, which is above the MHW mark. The marshlands appear to be identified by horizontal lines shading specific areas of the map. Finally, the map (Sheet 2) also shows the levees crossing three smaller sloughs. These smaller sloughs are not specifically identified in the permit. The permit and its accompanying documents are silent on the elevations of these sloughs and on whether the Army intended to extend RHA protection to them.

In finalizing its jurisdictional determination for this parcel, the District may also consider other existing historical information that supplements the information contained in the permit and its accompanying documents to ensure a full and accurate understanding of the site. However, the District has the burden of substantiating the location of any tidal waters that

[48] War Department Permit issued to Stauffer Chemical Company, January 16, 1940.

were below the MHW mark at the time the levees were constructed to assert RHA jurisdiction over those areas. The information and representations in the permit should receive deference unless there is convincing evidence that the other historical materials provide a more accurate representation of the site at the time the levees were constructed.

Clean Water Act

Overview

The geographic extent of CWA jurisdiction is a distinct question from RHA jurisdiction.[49] The geographic extent of CWA jurisdiction is generally greater than that under the RHA; however, that is not always the case.[50] Because of the different goals of the statutes and as a consequence of the rule of indelible navigability, some areas that are no longer covered by "waters" may be subject to RHA jurisdiction but not CWA jurisdiction. There is no comparable rule of indelible jurisdiction for the CWA.[51] The following discussion analyzes the CWA and implementing regulations in light of relevant legal precedent to determine whether the site of the Redwood City salt plant is subject to CWA jurisdiction. It concludes that the liquid pickle and bittern on the site is not "water" and that therefore these liquids are not subject to CWA jurisdiction. It examines the Ninth Circuit's basis for finding CWA jurisdiction over other Bay-area salt plant sites in *Froehlke*, and explains why that decision is not applicable to the Redwood City site.

Factual Setting

The factual setting set forth at the beginning of this document is relevant to the discussion of CWA jurisdiction over the site. However, there are some details that are particularly relevant to CWA jurisdiction that merit mention here. Specifically, the entire site is controlled by Cargill, and other parties cannot access the site without Cargill's permission. The entire Redwood City site had been converted into its current configuration by 1951, before passage of the CWA in 1972, and has operated as an industrial salt-making facility since that time.[52] That conversion required significant manipulation of the immediate geography. The

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[49] See *Milner*, 583 F.3d at 1194 ("the scope of the Corps' regulatory authority under the CWA and RHA is not the same").

[50] See *U.S. v. Riverside Bayview Homes, Inc.*, 474 US 121, 133 (1985) ("Congress evidently intended to repudiate limits that had been placed on federal regulation by earlier water pollution control statutes and to exercise its powers under the Commerce Clause to regulate at least some waters that would not be deemed "navigable" under the classical understanding of that term.").

[51] Environmental Protection Agency, *Guidelines for Specification of Disposal Sites for Dredged or Fill Material*, 45 Fed. Reg. 85,336, 85,340 (Dec. 24, 1980) ("When a portion of the Waters of the United States has been legally converted to fast land by a discharge of dredged or fill material, it does not remain waters of the United States subject to section 301(a). The discharge may be legal because it was authorized by a permit or because it was made before there was a permit requirement.").

[52] Redwood City Salt Plant Approved Jurisdictional Determination Submission (May 30, 2012) Attachment B. p. 9.

site is partitioned into various cells by a network of levees that also serve as roads and building pads.[53] Most of the cells are used to contain the liquids that are used to produce salt or that are a by-product of the salt making process. The process on this site begins when pickle is pumped from facilities at other locations after several years of processing. That liquid is then moved through a succession of cells at the Redwood City site before the salt is precipitated out of suspension in the crystallizer cells.[54] Once the salt precipitates out of solution, the remaining liquid, bittern, is moved into other cells to be recycled back into the process or sold for other uses.[55] The content of the cells is controlled by the operator of the site and all cells can be entirely drained.[56] For the solar evaporation process to work and increase the concentration of the pickle, the containment cells must be hydrologically separated from the neighboring Bay waters.[57] Any discharge of the pickle or bittern into CWA jurisdictional waters would require a CWA permit.[58]

CWA Statutory Scheme

Congress enacted the CWA to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters."[59] The statute makes "the discharge of any pollutant by any person [into the waters of the United States] . . . unlawful" unless such discharge is permitted under Section 402 or 404 of the Act.[60] The U.S. Environmental Protection Agency (EPA) administers the Section 402 program through the National Pollution Discharge Elimination System (NPDES) to regulate all pollutants except for dredged material and fill material.[61] As part of the NPDES program, EPA establishes effluent limitations guidelines that set pollution control standards for specific pollutants or classes of pollutants. Any discharge of pollutants with effluent limitations requires a permit and must meet those guidelines to comply with the CWA. The U.S. Army Corps of Engineer administers the Section 404 program to regulate the discharge of dredged material and fill material.[62]

The geographic scope of CWA jurisdiction is defined in statute as "navigable waters" and the "contiguous zone or the ocean."[63] "Navigable waters" is further defined by the statute to

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[53] *Id.* at 4.
[54] *Id.* at 3-4.
[55] *Id.*
[56] *Id.*
[57] *Id.* at 8.
[58] *Id.* at 25 n.49. See also 40 C.F.R. § 415.160 et seq.
[59] 33 U.S.C. § 1251.
[60] 33 U.S.C. § 1311. See also 33 U.S.C. § 1362(7) and (12) defining "navigable waters" and "discharge of a pollutant" respectively.
[61] 33 U.S.C. § 1342.
[62] 33 U.S.C. § 1344.
[63] 33 U.S.C. § 1362.

mean "the waters of the United States, including the territorial seas."[64] The structure of the statute makes it clear that the CWA was intended to protect more than just the "traditional navigable waters" that are jurisdictional under the RHA.[65] Congress meant for the definition of the term "navigable waters" to "be given the broadest constitutional interpretation"[66] because "[w]ater moves in hydrologic cycles and it is essential that discharge of pollutants be controlled at the source."[67] However, recent Supreme Court opinions have held that the term "navigable" cannot be read out of the statute when interpreting the jurisdictional scope of the CWA.[68] Thus, Corps permits are required for discharges of dredged material or fill material into "navigable waters" defined as "waters of the United States."

Regulations Implementing the CWA

The agencies charged with implementing the CWA, the EPA and the Corps, define "waters of the United States" by regulation to reach beyond "navigable waters" as that term was traditionally used to protect "all waters that together form the entire aquatic system."[69] While the regulatory definition of jurisdictional "waters of the United States" is broad, it does not cover everything that is wet.[70] Indeed, the Supreme Court has recognized that certain types of waters are not jurisdictional,[71] as has the Ninth Circuit.[72] EPA and Corps regulations set forth seven generally defined types of water bodies that are jurisdictional "waters of the United States:"

> (1) All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
> (2) All interstate waters including interstate wetlands;
> (3) All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa

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[64] 33 U.S.C. § 1362(7).
[65] *Rapanos v. U.S.*, 547 U.S. 715, 731 (SCALIA, majority), 767-68 (KENNEDY, concurring) (2009).
[66] 42 Fed.Reg. 37122, 37127 (July 19, 1977) (quoting H.R. Report No. 92-1465 at 144).
[67] S.Rep. No. 92-414, 1972 U.S.C.C.A.N 3668, 3742 (1972).
[68] *Rapanos*, 547 U.S. at 731 (SCALIA, majority), 779 (KENNEDY, concurring).
[69] *U.S. v. Riverside Bayview Homes,* 474 US at 133 (quoting the preamble to the rulemaking establishing the regulations defining the geographic scope of CWA jurisdiction, 42 Fed.Reg. 37128 (1977)); see also 33 C.F.R. Part 328.
[70] For example, "non-tidal drainage and irrigation ditches excavated on dry land." 51 Fed. Reg. 41206, 41217 (Nov. 13, 1986).
[71] See *Rapanos*, 547 U.S. 715; *Solid Waste Agency of Northern Cook County v. USACE*, 531 U.S. 159 (2001) (hereinafter "*SWANCC*").
[72] See *San Francisco Baykeeper v. Cargill Salt Division*, 481 F.3d 700 (9th Cir. 2007) (holding that a pond alleged to be jurisdictional was not a "water of the United States" because "mere adjacency provides a basis for CWA coverage only when the relevant waterbody is a 'wetland,' and no other reason for CWA coverage of Cargill's pond is supported by evidence").

lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce including any such waters:
(i) Which are or could be used by interstate or foreign travelers for recreational or other purposes; or
(ii) From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or
(iii) Which are used or could be used for industrial purpose by industries in interstate commerce;
(4) All impoundments of waters otherwise defined as waters of the United States under the definition;
(5) Tributaries of waters identified in paragraphs (a) (1) through (4) of this section;
(6) The territorial seas;
(7) Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (a)(1) through (6) of this section.[73]

Any water that does not fall within one of those defined types of water is not jurisdictional under the CWA. Additionally, even if a water falls within one of the seven defined types, jurisdiction will not attach if it is one of two categories of water explicitly excluded from jurisdiction by the regulations:

> (8) Waters of the United States do not include prior converted cropland. Notwithstanding the determination of an area's status as prior converted cropland by any other Federal agency, for the purposes of the Clean Water Act, the final authority regarding Clean Water Act jurisdiction remains with EPA.
>
> Waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of CWA (other than cooling ponds as defined in 40 CFR 423.11(m) which also meet the criteria of this definition) are not waters of the United States.[74]

Corps districts must determine if a water falls within one of the seven categories of jurisdictional water. If a district determines that the water does not fall within one of these seven categories or that it is one of the explicitly excluded types, then the water is not jurisdictional.

In reviewing this list of "waters of the United States," it is evident on first impression that the liquids on the Redwood City site do not fall clearly into any of the seven categories. The site has been highly altered to facilitate the salt manufacturing process. This alteration of the site and a century of industrial salt making have eliminated any trace of the prior marshland

[73] 33 C.F.R. § 328.3(a).
[74] 33 C.F.R. § 328.3(a).

or wetland character of the site. The liquids on the site are intentionally hydrologically separated from the Bay and are not subject to the ebb and flow of the tide. While the liquids on the site originated as water from the Bay, they have been subjected to years of carefully managed processing that has rendered the liquids legally and chemically distinguishable from the water in the Bay. These liquids are wholly within the boundaries of the State of California and are not navigated in interstate commerce, or a part of the territorial seas. Likewise, the liquids are not impoundments of waters otherwise defined as waters of the United States.

These facts suggest that the liquids on the Redwood City site do not fall in any of the seven categories of "waters of the United States" as set forth in the regulations. However, several recent Supreme Court decisions have made the task of determining CWA jurisdiction more complicated than simply applying the regulations. The Court has twice found that the Corps' interpretation and application of the regulatory definition of "waters of the United States" exceeded the scope of jurisdiction provided by the CWA statute. Therefore, the Corps must apply both the regulatory definition of the scope of jurisdiction and the standards for jurisdiction established by the Supreme Court. A water must be determined to be jurisdictional under the regulations *and* the standards established by the Supreme Court for the CWA to apply.

CWA Applies Prospectively

The Supreme Court has "long declined to give retroactive effect to statutes burdening private rights unless Congress had made clear its intent."[75] This presumption holds true for the CWA. The CWA is intended "to regulate discharges of dredged or fill material into the aquatic system as it exists, and not as it may have existed over a record period of time."[76] This was recently confirmed by the Ninth Circuit in *Milner*:

> if land was dry upland at the time the CWA was enacted, it will not be considered part of the waters of the United States unless the waters actually overtake the land, even if it at one point had been submerged before the CWA was enacted or if there have been subsequent lawful improvements to the land in its dry state.[77]

Thus, areas that were lawfully filled, either before the passage of the CWA or pursuant to a CWA permit, are no longer subject to CWA jurisdiction.[78] The fact that the majority of the area

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[75] *Landgraf v. USI Film Products*, 511 U.S. 244, 270 (1994).
[76] 42 Fed. Reg. 37122, 37128 (July 19, 1977).
[77] *Milner*, 583 F.3d at 1195.
[78] Environmental Protection Agency, *Guidelines for Specification of Disposal Sites for Dredged or Fill Material*, 45 Fed. Reg. 85,336, 85,340 (Dec. 24, 1980) ("When a portion of the Waters of the United States has been legally converted to fast land by a discharge of dredged or fill material, it does not remain waters of the United States

within the Redwood City site was improved in a manner that did not necessarily raise the elevation above that of the MHW does not make this principal any less applicable. A CWA jurisdictional determination must be based on the site conditions today and not some prior site condition that no longer exists.[79]

Supreme Court Holdings on CWA Jurisdiction

The Supreme Court has twice found that the Corps' application of the regulations defining the jurisdictional scope of the CWA exceeded the statutory authority.[80] The Court expressed concern over the Corps' broad interpretation and application of the term "waters of the United States" in both cases. Indeed, the Supreme Court observed that in drafting those regulations, the agencies "deliberately sought to extend the definition of 'the waters of the United States' to the outer limits of Congress's commerce power."[81] The Supreme Court held "that 'the waters of the United States' in § 1362(7) cannot bear the expansive meaning that the Corps would give it"[82] and is "not 'based on a permissible construction of the statute.'"[83] In the most recent of those cases, *Rapanos*, the Supreme Court set out two alternative standards for determining CWA jurisdiction. As a result, the Corps must ensure that any assertion of CWA jurisdiction is consistent with the regulations *and* at least one of the two alternative standards established in the *Rapanos* decision.

The two alternative standards for determining what is jurisdictional under the CWA exist because Supreme Court's decision in *Rapanos* was issued without a majority opinion. Three Justices joined in the plurality opinion that Justice Scalia authored, which had arguably the narrower standard for what is jurisdictional under the CWA. Justice Kennedy concurred in the judgment but wrote his own opinion setting forth a different legal standard than that of the plurality. Four justices dissented and would have held that a far more inclusive standard applied. In such cases, controlling legal principles may be derived from those principles espoused by five or more justices.[84] Therefore, there is CWA jurisdiction when the plurality's standard, authored by Justice Scalia, is satisfied, or when the standard in Justice Kennedy's

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subject to section 301(a). The discharge may be legal because it was authorized by a permit or because it was made before there was a permit requirement.").

[79] See *Milner*, 583 F.3d at 1195;

[80] *Rapanos*, 547 U.S. 715; *SWANCC*, 531 U.S. 159.

[81] *Rapanos*, 547 U.S. at 724 (SCALIA, plurality).

[82] *Id.* at 731-32 (SCALIA, plurality), 778-79 (KENNEDY, concurring).

[83] *Id.* at 739 (SCALIA, plurality).

[84] See *Marks v. United States*, 430 U.S. 188, 193-94 (1977); *Waters v. Churchill*, 511 U.S. 661, 685 (1994) (Souter, J., concurring) (analyzing the points of agreement between plurality, concurring, and dissenting opinions to identify the legal "test ... that lower courts should apply," under *Marks*, as the holding of the Court); cf. *League of United Latin American Citizens v. Perry*, 126 S. Ct. 2594, 2607 (2006) (analyzing concurring and dissenting opinions in a prior case to identify a legal conclusion of a majority of the Court); *Alexander v. Sandoval*, 532 U.S. 275, 281-282 (2001) (same).

concurring opinion is satisfied. The plurality concluded that the agencies' regulatory authority should extend only to "relatively permanent, standing or continuously flowing bodies of water . . . connected to traditional interstate navigable waters," and to "wetlands with a continuous surface connection to" such relatively permanent waters.[85] Justice Kennedy held that "to constitute 'navigable waters' under the Act, a water or wetland must possess a 'significant nexus' to waters that are or were navigable in fact or that could reasonably be so made."[86]

Supreme Court on CWA Jurisdiction and What Constitutes "Waters"

Applying the standards for CWA jurisdiction set forth by the Supreme Court to the Redwood City site will be more instructive than applying the regulations to determine if the liquids located there are jurisdictional. This is because the liquids at the site raise a fundamental question: what kinds of liquids constitute "water" as that term would be understood by a majority of the Supreme Court?

In the Supreme Court's most recent decision regarding CWA jurisdiction, *Rapanos*, the plurality opinion emphasized that "the CWA authorizes federal jurisdiction only over 'waters.'"[87] The opinion analyzes the meaning of the statutory definition of "navigable waters," which is "the waters of the United States," to determine if the agencies' interpretation and application of that term is consistent with the authority conferred by the statute. The analysis includes an extensive dissection of the definition of "water" from the second edition of Webster's New International Dictionary because the term "water" is not defined in statute or regulation. The plurality concludes that the term can only mean "relatively permanent, standing or flowing bodies of water."[88] The plurality opinion cites to this definition to require a more limited scope of CWA jurisdiction than the agencies' interpretation, which allowed for CWA jurisdiction over certain intermittent and ephemeral waters. The plurality demanded that the scope of CWA jurisdiction "accord[] with the commonsense understanding of the term [water]."[89] The concurring opinion in *Rapanos* also looks at the same dictionary definition, but does so to show that an understanding of the term "waters" that is broader than the majority's also accords with the dictionary and common sense.[90] Justice Kennedy does not reject the principle that the definition of "water" needs to accord with the commonsense understanding, but rather he believes that a broader interpretation of the term is possible within such a commonsense understanding. The *Rapanos* decision shows that the Supreme Court will closely

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[85] *Rapanos*, 547 U.S. at 739, 742 (SCALIA, plurality).
[86] *Id.* at 759 (KENNEDY, concurring). Chief Justice Roberts wrote a separate concurring opinion explaining his agreement with the plurality. See 547 U.S. at 757-759.
[87] *Rapanos*, 547 U.S. at 731.
[88] *Id.* at 732.
[89] *Id.* at 733.
[90] *Id.* at 770.

examine regulatory interpretations of the scope of CWA jurisdiction, and that while interpretations of language may differ, the Supreme Court will likely demand that any interpretation of "waters of the United States" be consistent with commonly accepted understandings of terms such as "water."

Applying this analysis to the Redwood City site, the Corps must determine whether the liquids on the site are "water" as a majority of the Supreme Court understands that term. The *Rapanos* decision is instructive on the type and method of inquiry involved, but the specific analysis in *Rapanos* is not relevant to the issue at hand because the discussion in that case contrasted geographic features that were regularly covered with water with features that were normally dry or only occasionally covered with water. It did not address what kinds of liquids qualify as "water." Therefore, we are left to apply the analytical rubric from *Rapanos* to this slightly different question regarding the meaning of the term "water."

Looking at the definition of "water" in the second edition of Webster's New International Dictionary, the same definition relied on by Justice Scalia in the plurality opinion in *Rapanos*, one finds that the first two definitions of "water" refer to the naturally occurring substance that (1.a.) "descends from the clouds in rain," (1.b.) the "substance having the composition H_2O," or (2) "liquid substance occurring not chemically combined, in any of various quantities, states or aspects" . . . (2.a.) "[a]s derived from natural sources" or (2.b.) "[a]s found in streams and bodies forming geographical features such as oceans, rivers, lakes."[91] Only the third definition includes "liquid containing or resembling or of the fluidity and appearance of water" or a "liquid prepared with water, as by solution."[92] Tellingly, this later meaning of the term is defined by contrasting the liquid with "water," meaning that identifying such liquids as "water" is more attenuated and less "commonsense" than those described in the first two definitions.

Applying the *Rapanos* plurality's method of analysis, the "commonsense understanding" of "water" would include relatively naturally occurring forms of H_2O such as those found in "rivers, lakes, and seas." This doesn't mean that only pure water, or pure sea water, is regulated under the CWA. After all, the Cuyahoga River was not a pure, unadulterated water when it caught fire in 1969. That event is widely regarded as "one of a handful of disasters that led to . . . the passage of the Clean Water Act."[93] So, it can be assumed that natural, but contaminated or adulterated, water bodies like the Cuyahoga in 1969 are among the types of

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[91] *Webster's New International Dictionary* 2882 (2nd ed. 1954) (hereinafter "Webster's Second").
[92] *Id.*
[93] Christopher Maag, *From the Ashes of '69, a River Reborn*, N.Y. Times, June 21, 2009, http://www.nytimes.com/2009/06/21/us/21river.html; see also *Rapanos*, 547 U.S. at 809 (STEVENS, dissent) ("Congress passed the Clean Water act in response to widespread recognition – based on events like the 1969 burning of the Cuyahoga River in Cleveland – that our waters had become appallingly polluted.").

waters that Congress intended to cover under the CWA. However, the liquids on the Redwood City site are a different sort. Those liquids are not within a natural water body; they are contained within an intentionally engineered industrial complex. The composition of the liquids is not a consequence of the discharge of pollutants or the disposal of wastes, but a consequence of a purposeful industrial process to create a product. And, unlike the Cuyahoga River, there are no potential users of the liquids at the Redwood City site other than the site owner that could be impacted by their composition.[94]

The commonsense understanding of the term "water," and one that accords with the definition of "water" in Webster's Second, does not include the pickle or bittern on the Redwood City site, which are products of an industrial process. Other than being in an aqueous form and being originally derived from Bay waters, the liquids on the Redwood City site are more commonly understood to be a chemical used in, or a byproduct of, an industrial process. Additionally, these liquids are regulated as a pollutant under Subpart P (Sodium Chloride Production Subcategory) of the CWA.[95] Thus, these liquids should be treated as an industrial product and not as "water," which is consistent with how EPA has classified this substance in its regulations and which means that they should not be treated as a jurisdictional water under the CWA.

Applicability of the CWA to the Redwood City Site

In sum, the pickle and bittern liquids at the Redwood City site are an industrial product regulated as a pollutant under the CWA; the site is not part of the aquatic system; and any discharge of the liquids to waters of the United States would require a CWA permit. Given these facts and the purposes the CWA is intended to serve, the pickle and bittern liquids at the site are *not* "water" potentially subject to jurisdiction under the CWA.

Leslie Salt Co. v. Froehlke

The *Froehlke* decision was discussed extensively in the section above on RHA jurisdiction, but it bears mentioning again here because that case addressed the jurisdictional status of Bay area salt ponds under the CWA as well as the RHA. In *Froehlke*, the Ninth Circuit

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[94] This is similar to waste treatment systems, which are categorically excluded from CWA jurisdiction in the regulatory definition of "waters of the United States" because they are not susceptible to being used by entities operating in interstate commerce other than the entity that controls the waste treatment system. The rationale behind this is that the agencies were concerned with regulating water pollution that has the potential to affect entities operating in interstate commerce, rather than regulating the use of waters in interstate commerce if that use had no potential to affect other users in interstate commerce. See EPA, Decision of the General Counsel, *NPDES Permits*, Opinion No. 73 (Dec 15, 1978); *National Pollutant Discharge Elimination System; Revision of Regulations, Final Rule*, 44 Fed.Reg. 32854, 32858 (June 7, 1979). See also, EPA, *A Collection of Legal Opinions*, Vol. 1 at 295.

[95] 40 C.F.R. § 415.160 et seq.

corrected the district court's holding that CWA jurisdiction was "coterminous" with RHA jurisdiction and that both were determined by identifying the "former line of MHHW of the bay in its unobstructed, natural state."[96] The Ninth Circuit made it clear that instead of being "coterminous" with RHA jurisdiction, CWA jurisdiction was generally broader than RHA jurisdiction.[97] The Ninth Circuit also addressed the question of "whether the Corps' jurisdiction covers waters which are no longer subject to tidal inundation because of man-made obstructions such as Leslie's dikes," which the court viewed as the central issue under review in that case.[98] In addressing this question, the court relied on the finding that the liquid behind the levees was the same as the water in the San Francisco Bay.[99] The court also noted that Leslie used the salt ponds to manufacture a product that is sold in interstate commerce as a basis for regulating them under the CWA.[100] On those grounds, the Ninth Circuit held that "the Corps's jurisdiction under the FWPCA [CWA] extends at least to waters which are no longer subject to tidal inundation because of Leslie's dikes without regard to the location of historic tidal water lines in their unobstructed, natural state."[101]

In sum, the *Froehlke* finding that CWA jurisdiction could extend to waters behind levees was based on two premises: first, that the liquid behind the levees was the "same" as the water in the Bay and equally worthy of protection from pollution; and second, that the end product that was extracted from the impounded water was sold in interstate commerce and therefore within the constitutional limits of the Commerce Clause. However, in the intervening 35 years since the *Froehlke* decision, there have been a number of Supreme Court cases that bear upon the continued validity of these premises and the Ninth Circuit's finding based upon them.

Frohlke: "Water" Behind Levees has a Status Equal to Water in the Bay

The Ninth Circuit's premise for affirming CWA jurisdiction in the *Froehlke* case, which is that the liquid behind the levees confining the Bay area salt plants was the "same" water as in the Bay, has been brought into doubt by intervening Supreme Court decisions, at least with respect to the liquids at the Redwood City site. As discussed above, by the time liquids are transferred to the Redwood City site, they have been processed for at least four years, resulting

[96] *Froehlke*, 578 F.2d at 753.
[97] *Id.* at 754-55.
[98] *Id.* at 754.
[99] *Id.* at 755 ("We see no reason to suggest that the United States may protect these waters from pollution while they are outside of Leslie's tide gates, but may no longer do so once they have passed through these gates into Leslie's ponds.").
[100] *Id.* ("Moreover, there can be no question that activities within Leslie's salt ponds affect interstate commerce, since Leslie is a major supplier of salt for industrial, agricultural, and domestic use in the western United States. Much of the salt which Leslie harvests from the Bay's waters at the rate of about one million tons annually enters interstate and foreign commerce.").
[101] *Id.* at 756.

in a significantly higher salinity than the Bay water; they have been hydrologically severed from the larger aquatic system; and they are regulated as pollutants under the CWA. The liquids at the Redwood City site are therefore chemically distinguishable, ecologically distinguishable, and legally distinguishable from the Bay waters. They are no longer the type of resource the CWA was intended to protect. The liquids at the Redwood City site are more commonly understood to be a chemical used in, or a byproduct of, an industrial process rather than "water."

Given what recent Supreme Court precedents reveal about the scope of CWA jurisdiction, we cannot reasonably expect to regulate as "water" liquids that have been managed as part of a closed-system industrial solar evaporation process for a period of several years or more and that are regulated as a pollutant under the CWA. Therefore, the Corps should not assert CWA jurisdiction over the industrial process (pickle and bittern) liquids at the Redwood City site.

Frohlke: Interstate Commerce Connection

Because the industrial process liquids at the Redwood City site are not "water" for the purposes of CWA jurisdiction, the question of whether there is an interstate commerce connection with the liquids on the site is no longer relevant. Even with an appropriate interstate commerce connection to the liquids at the site, those liquids must be "water" for CWA jurisdiction to attach. Moreover, the Supreme Court's recent decisions requiring that "the word 'navigable' in the Act must be given some effect" or "significance" when interpreting the jurisdictional scope of the CWA suggest that the type of interstate commerce connection identified by the Ninth Circuit in *Frohlke* is not the type of interstate commerce connection required to establish CWA jurisdiction.[102]

The specific interstate commerce connection the Ninth Circuit cited in *Froelke* was that "Leslie is a major supplier of salt for industrial, agricultural, and domestic use in the western United States."[103] This interstate commerce connection does not give any significance to the word 'navigable' in the Act.[104] After the Supreme Court's decisions in *SWANCC* and *Rapanos*,

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[102] *Rapanos*, 547 U.S. at 731 (SCALIA, majority), 779 (KENNEDY, concurring).

[103] *Froehlke*, 578 F.2d at 755.

[104] Additionally, this type of interstate commerce connection was not what was contemplated by the agencies when the CWA regulations were developed. The valid test is not whether a liquid is susceptible to use in interstate commerce by the entity that controls the liquid, but rather whether a liquid is susceptible to use in a manner that would affect interstate commerce by entities other than the entity that controls the liquid. See EPA, *A Collection of Legal Opinions*, Vol. 1 at 295; EPA, Decision of the General Counsel, *NPDES Permits*, Opinion No. 73 (Dec. 15, 1978); 44 Fed.Reg. at 32858.

the Corps should not assert CWA jurisdiction under 33 C.F.R. § 328.3(a)(3) on the basis of a connection to interstate commerce unless there is a significant nexus to navigable waters.[105]

Bases for CWA Geographic Jurisdiction

There does not appear to be any reasonable legal basis for asserting CWA jurisdiction over the Redwood City site. The liquids on the site are more commonly understood to be chemicals used in, or a byproduct of, an industrial process rather than "water." Additionally, the *Froehlke* decision's findings on CWA jurisdiction have been brought into doubt by more recent Supreme Court decisions and should not be relied on when determining CWA jurisdiction at the Redwood City site. For these reasons, the Corps should not exercise CWA jurisdiction over the highly concentrated saline liquids ("pickle") or waste product from this process ("bittern"), and no further CWA analysis is required.

As mentioned above, CWA jurisdiction is normally broader than RHA jurisdiction, but that is not always the case.[106] In some instances CWA jurisdiction is narrower, such as where the principle of indelible navigability is invoked to assert RHA jurisdiction over areas that are no longer inundated with water. Such is the case here. *Milner* holds that this difference "is explained by the RHA's concern with preventing obstructions, on the one hand, and the CWA's focus on discharges into water, on the other."[107]

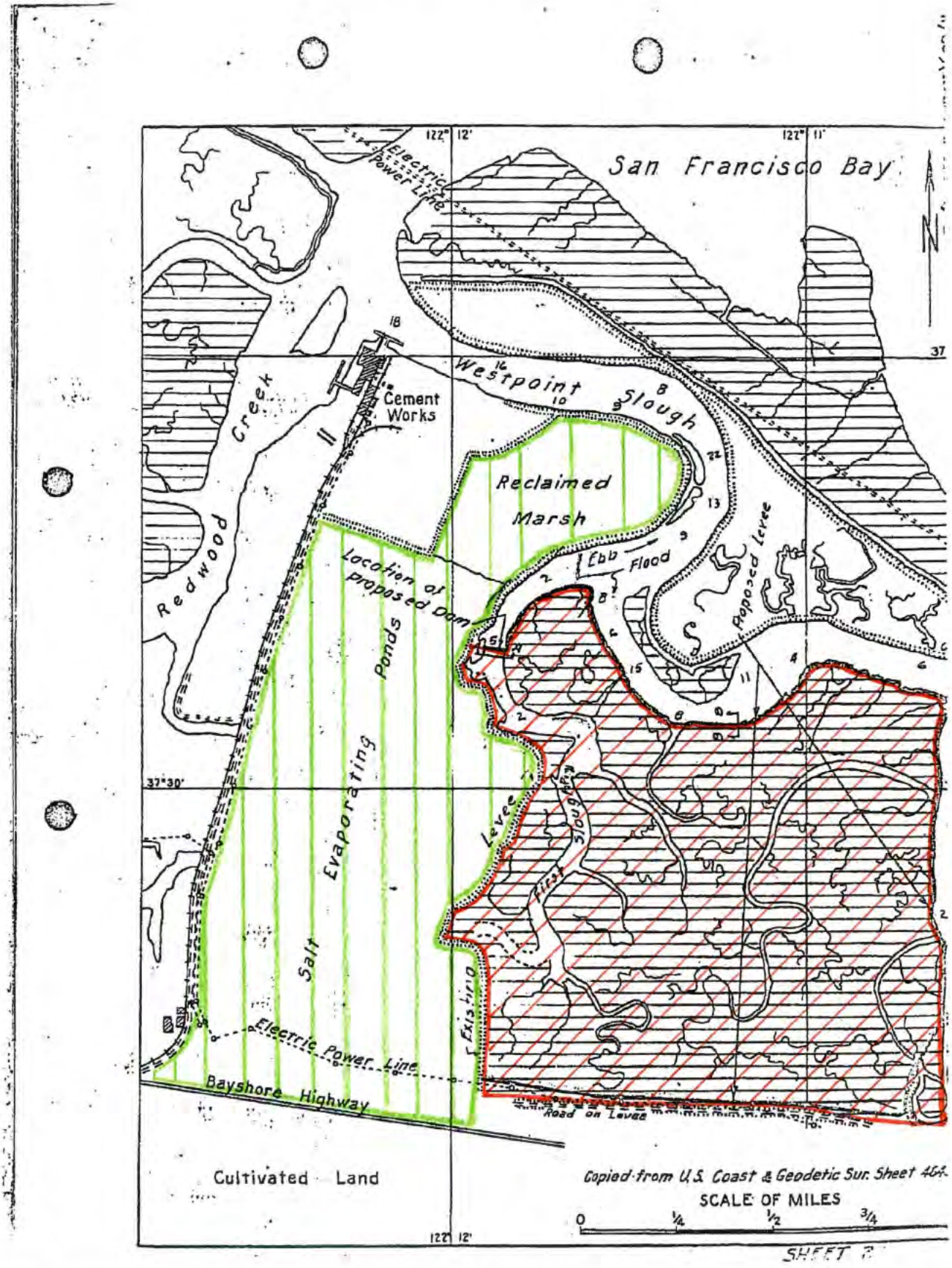
Continued Coordination

The close coordination between the San Francisco District, South Pacific Division, and Headquarters staff on the correct legal principles to apply when making RHA and CWA jurisdictional determinations at the Redwood City site is appreciated. This office looks forward to continuing that coordination on the approved jurisdictional determination for the site.

Earl H. Stockdale
Chief Counsel

[105] The meaning of "navigable waters" as that term is used in the CWA has been ruled on by numerous courts, and more is required for a water to be a "navigable water" than just the capacity to float a boat. Waters need to be "susceptible of being used, in their ordinary condition, as highways for commerce" to be navigable-in-fact and thus a "navigable water" on the basis of their capacity to be navigated. *The Daniel Ball*, 77 U.S. 557, 563 (1870). Such susceptibility does not exist at the Redwood City site in its ordinary condition.
[106] *Milner*, 583 F.3d at 1196.
[107] *Id.*

ATTACHMENT 1



"SHEET 2" from January 19, 1940 War Department Permit

Supplement to "Legal Principles to Guide the Approved Jurisdictional Determination for the Redwood City Salt Plant" 9 January 2014

CECC-ZA

25 March 2014

Introduction

This document supplements the 9 January 2014 memorandum titled "Legal Principles to Guide the Approved Jurisdictional Determination for the Redwood City Salt Plant" to address questions raised regarding positions taken in that document and to discuss new information and views that were subsequently provided by the Corps' San Francisco District. Specifically, this document addresses the determination of Rivers and Harbors Act of 1899 (RHA) jurisdiction over the western portion of the Redwood City salt plant site (parcel 1, shown in green on the map attached to the 9 January 2014 document). The previous writing concluded that RHA jurisdiction should not be exercised over the western portion of the site because that area was either never subject to RHA jurisdiction or because any RHA jurisdiction that arguably might have existed over that area had been surrendered.

The discussions between the Corps district, division, and headquarters personnel and a review of the additional information and recommendations provided by the San Francisco District prompted this further elaboration on the issue of surrender and RHA jurisdiction over the western parcel of the site. For the purposes of making an approved jurisdictional determination for the Redwood City site, it is unnecessary to establish a definitive, general rule on how and when surrender of RHA jurisdiction can occur in every situation and circumstance. Likewise, while there is evidence that major portions of the western parcel were never jurisdictional under RHA, it is unnecessary to trace in detail the jurisdictional status of the different areas of the site over time to determine how to proceed under the RHA. The history of permit actions for the site distinguishes the western parcel from those cases in which courts found that jurisdiction has not been surrendered and from the circumstances that were briefed in the *Cargill v. West* case in which the issue of surrender was raised but not litigated to finality with respect to another parcel of Bay-area property in the 1990s.[1]

The history specific to the western portion of the Redwood City salt plant site creates an unfavorable factual record that could form the basis for compelling arguments in any litigation brought by the landowner that either RHA jurisdiction never existed over the western portion of the site, or that any RHA jurisdiction that may have existed prior to the development of the site has been surrendered. The challenges created by the unfavorable factual record are

[1] *Cargill v. West, et al.*, No. C-92-20756-RMW (N.D. Cal. Dec. 23, 1994) (Order Denying Defendants' Motion to Dismiss and Remanding the Case to the Corps).

Attachment 5

compounded by the lack of clarity on the legal standard regarding when there is a surrender of RHA jurisdiction. Because of these challenges, which would likely lead to an unfavorable legal precedent from the federal courts, the Corps shall decline to assert any RHA jurisdiction it arguably may have had or has over the western portion of the site.

Legal Standard for Surrender

There is scant case law on surrender of RHA jurisdiction that is pertinent to the circumstances at this site. As previously discussed, the leading case is *United States v. Stoeco Homes, Inc.* However, subsequent decisions have made clear that surrender will not be implied or be based on acquiescence, but must be in "unmistakable terms."[2] However, in the cases where surrender was found, the "unmistakable terms" that accomplished surrender were something less than an explicit statement by the government that regulatory jurisdiction or the navigation servitude was being surrendered or forfeited. There is no bright line rule that can be applied mechanically to determine if there is a surrender. Instead, the factual circumstances of any situation where surrender is a possibility should be evaluated in light of those few cases that have addressed claims that RHA jurisdiction or the navigation servitude was surrendered.[3]

Many cases that address surrender involve condemnation actions or takings claims, but there are several cases with analysis that may be relevant to claims that RHA jurisdiction has been surrendered.[4] Cases where courts have found that jurisdiction was not surrendered generally involved prior acquiescence to obstructions to navigation,[5] fill deposited by the United States in furtherance of navigation,[6] prior activities on tidal wetlands that did not destroy their wetland characteristics,[7] or disposition of fee interest in the land below the MHW mark.[8] The commonality between these cases is that the government action (or inaction) at issue in each case was taken without any statement regarding the jurisdictional status of the waters or former waters at issue, and there was no reasonable basis for expecting the property to be unhindered by the navigation servitude or RHA jurisdiction. In contrast, several cases found that RHA jurisdiction or the navigation servitude were surrendered based on some affirmative government statement regarding the status of RHA jurisdiction or the navigation servitude over the waters at issue, whether it was the formal establishment of harbor lines

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[2] *US v. Cherokee Nation of Oklahoma*, 480 U.S. 700 (1987); *Lambert v. JA Jones*, 835 F2d 1105 (5th Cir 1988).

[3] While there may be grounds for distinguishing regulatory jurisdiction under the RHA and the navigation servitude, as suggested by *Boone v. United States*, 944 F.2d 1489 (9th Cir. 1991), there does not appear to be legal consensus that RHA jurisdiction can only be extinguished through equitable estoppel and not through the surrender analysis employed by the court in *Stoeco*. *See Cargill v. West, et al.*, No. C-92-20756-RMW (N.D. Cal. Jul 12,1994)(Order on Dispositive Motions) (order applying surrender analysis to RHA jurisdiction after the U.S. argued that only equitable estoppel was applicable).

[4] The following is not intended to be an exhaustive examination of all cases addressing surrender.

[5] *U.S. v. Sasser*, 771 F.Supp 720 (D. S.C. 1991).

[6] *US v. 49.79 Acres of Land, More or Less*, 582 F.Supp 368 (D.Del. 1983).

[7] *U.S. v Ciampitti*, 583 F.Supp 483 (D. N.J. 1984).

[8] *US v. Cherokee Nation of Oklahoma*, 480 U.S. 700 (1987).

behind which fill was given blanket authorization,[9] or entering into a stipulation agreement whereby certain promises were made by the United States to a landowner to protect the landowner's interests and improvements to property over which the navigation servitude was previously asserted.[10] In both of these cases, the court also found that the landowners had a reasonable basis for believing the land was unhindered by the navigation servitude or RHA jurisdiction.

History of the Western Portion of the Redwood City Site

The western portion of the Redwood City site (parcel 1, shown in green on the map attached to the 9 January 2014 document) has a long history of development and involvement by the Corps. Specifically, the three permits discussed below provide evidence of the Corps' understanding of the condition of the western parcel. These permit actions are sufficient for the landowner to make strong arguments that most if not all of that parcel was never subject to RHA jurisdiction, or that any RHA jurisdiction that may have existed over the western parcel has been surrendered.

There is no indication that there were any permits or other authorizations required for the construction of the levees around the western portion of the Redwood City site. This is consistent with the practice at the time of only requiring permits for those activities that would have affected the navigable capacity of navigable-in-fact waters.[11] In 1940, the War Department issued a permit for the construction of levees bordering the eastern portion of the site (parcel 2, shown in red on the map attached to the 9 January 2014 document), immediately adjacent to the western parcel.[12] The 1940 permit identifies the northern portion of the western parcel as "reclaimed marsh" and the rest of the western parcel as "salt evaporating ponds," showing that the western parcel had been developed by that time and that the Corps did not require permits for that work. Admittedly, the 1940 permit request did not propose any work for the western parcel, so representation of the western parcel in that permit is less pertinent to whether there was surrender over the western parcel than the eastern parcel. However, the permit does show that the Corps was aware that the western parcel had been improved for salt-making operations and was no longer in its natural condition. Again, no permits were required for the prior work on the western parcel.

A subsequent Department of War permit issued to Leslie Salt in 1947 more squarely addressed the circumstances of the western parcel.[13] That permit authorized the dredging of material from four separate areas (two areas within Redwood Creek, one area with Westpoint Slough, and one area within a diked area to the west of the western parcel) and the "deposit

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[9] *Stoeco*, 498 F.2d 597 (3rd Cir. 1974).
[10] *U.S. v. 119.67 Acres of Land*, 663 F.2d 1328 (5th Cir. 1981).
[11] See *U.S. v. Alaska*, 503 U.S. 569, 580-81 (1992).
[12] War Department Permit issued to Stauffer Chemical Company, January 16, 1940.
[13] War Department Permit issued to Leslie Salt Company, April 26, 1947.

[of] the material removed on property belonging to the applicant *above the high water line.*"[14] On the map accompanying the permit, the entire area in the western parcel previously identified in the 1940 permit as "salt evaporating ponds" is marked as "area to be filled." The logical interpretation of the language of the permit, read in conjunction with the accompanying map, is that the majority of the western parcel (that portion shown as "salt evaporating ponds" on the 1940 permit) was above the mean high water line in 1947, that is, it had been converted into fast land and was therefore not subject to RHA jurisdiction.[15] Additionally, the public notice soliciting comment on the application for the 1947 permit explicitly stated that the permit "expresses the assent of the Federal Government in so far as concerns the public rights of navigation," making it clear what resource impacts were of interest.[16] This permit did not address the northern-most portion of the western parcel shown as "reclaimed marsh" in the 1940 permit.

In addition, part of this northern-most portion of the western parcel (the "reclaimed marsh") was addressed in a much more recent permit action from 2002.[17] This permit was for the development of Westpoint Marina in part of the area formerly occupied by Cargill's "Pond 10" and that generally corresponds to the area shown as "reclaimed marsh" on the 1940 permit. This area had been used to store bittern. The project that was subject to the 2002 permit action involved construction of an upland area to support roadways and other facilities, as well as the excavation of the marina basin. The only activity that was subject to jurisdiction under the RHA was "work to breach the existing levee after marina construction has been completed." Thus, the Corps did not assert RHA jurisdiction over the interior portion of the site to be developed as Westpoint Marina.[18] It is true that the lack of jurisdiction over the interior portion of this area has little direct relevance to the jurisdictional status of the rest of the site, but it does constitute evidence of the Corps' consistent pattern of practice of not asserting RHA jurisdiction over the western parcel.

Analysis of Law and Fact

The law regarding surrender is not well defined; there exists significant ambiguity as to what qualifies as the "unmistakable terms" required for there to be a surrender. The cases in which courts found that there was surrender involved some affirmative statement by the government about the jurisdictional status of the property (even if only as a class), as opposed to actions or inaction that did not purport to address jurisdiction. In the case of the western portion of the Redwood City site, there are multiple affirmative statements from the Corps that

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[14] *Id.* (emphasis added).

[15] *U.S. v. Willow River Power Co.*, 324 U.S. 499, 509 (1945)("High-water mark bounds the bed of the river. Lands above it are fast lands. . .").

[16] War Department, Corps of Engineers San Francisco District, Public Notice No. 47-43, March 28, 1947 (emphasis in original).

[17] USACE San Francisco District, *Public Notice; Project: WestPoint Marina*, Permit No. 22454S (May 17, 2002).

[18] In the permit for the Westpoint Marina, the Corps asserted RHA jurisdiction over work within the interior of the marina basin once the exterior levee was breached and the basin was inundated with water directly from the Bay.

could reasonably be interpreted to qualify as the type of unmistakable terms that the court relied on in *Stoeco* to find a surrender of any regulatory jurisdiction that may have existed. This is in contrast to the eastern portion of the site, where the initial activity modifying the natural topography was subject to a permit that contained an explicit reservation of jurisdiction.

Should the Corps assert RHA jurisdiction over any portion of the western parcel, there is a substantial likelihood that the property owner would challenge that assertion of jurisdiction in the federal courts. Given the uncertain law and the unfavorable facts regarding surrender in this circumstance, there is a high likelihood that a court could make bad law on surrender were the Corps to assert RHA jurisdiction over the western portion of the Redwood City site.

Alternative Interpretation of RHA Jurisdiction under *Froehlke* and *Milner*

In discussions with the San Francisco District about the 9 January 2014 memorandum, an alternative interpretation of the legal standard for RHA jurisdiction that should be derived from *Froehlke* and *Milner* was proffered.[19] It was suggested that the rule established in *Froehlke* and followed in *Milner* that RHA jurisdiction "extend[s] to all places covered by the ebb and flow of the tide to the mean high water (MHW) mark in its unobstructed, natural state" should be interpreted to mean that any area that *is currently* below the theoretical plane of the MHW mark projected across the landscape or that *would currently be* below this theoretical plane but for an artificial improvement (such as a levee as in *Froehlke* or a shore defense structure as in *Milner*, but possibly including other artificial improvements) is subject to RHA jurisdiction. Thus, in the case of a low-lying area separated from tidal waters by a levee, the levee and any area behind it that is below the elevation of the current MHW mark would be currently subject to RHA jurisdiction even if those areas had never been covered by water in the past.

Neither *Froehlke* nor *Milner* require this interpretation. The *Froehlke* decision merely determined whether the relevant benchmark for jurisdiction on the Pacific was the MHW mark or the mean higher high water (MHHW) mark, and did not apply the standard established to the circumstances in the case, so it is impossible to know how that court intended the standard to be implemented.[20] The *Milner* decision only held that the shore defense structures that were previously above the MHW mark at the time that they were constructed, but have come to be, at least in part, below the MHW mark now (because of erosion, sea level rise, or other changes), are now subject to RHA jurisdiction.[21] The court in *Milner* did not make any explicit holding regarding RHA jurisdiction over lands lying on the upland side of those shore defense structures. Thus, neither case held that land that is currently below the projected plane of the MHW line in its unobstructed natural state, but that currently is not covered with water due to

[19] *Leslie Salt Co. v. Froehlke*, 578 F.2d 742, 753 (9th Cir. 1978) (hereinafter "*Froehlke*"); *U.S. v. Milner*, 583 F.3d 1174, 1191 (9th Cir. 2009).
[20] *Froehlke*, 578 F.2d at 753.
[21] *Milner*, 583 F.3d at 1193.

an artificial obstruction, is now subject to RHA jurisdiction. The standard established for RHA jurisdiction in the 9 January 2014 memo is consistent with the holdings of *Froehlke* and *Milner*, more closely follow the Corps regulations implementing the RHA, and has more defensible implications for what areas may currently be jurisdictional under the RHA.

However, even if one were to accept the San Francisco District's alternative interpretation of the rule dictated by *Froehlke* and *Milner*, a court reviewing the matter would likely find that there is no RHA jurisdiction over the western parcel based on the San Francisco District's long-standing and well-publicized policy for determining RHA jurisdiction behind dikes or levees. The policy provides:

> Section 10 [RHA] jurisdiction will be exercised over areas behind dikes if <u>all</u> of the following criteria are met:
>
> 1. The area is <u>presently</u> at or below mean high water (MHW),
> 2. The area was historically at or below MHW in its "unobstructed, natural state" (i.e., the area was at or below MHW before the dikes were built), and
> 3. There is no evidence (elevation data) that the area was ever above MHW. [22]

Applying the evidence previously discussed to the rules established in the San Francisco District policy would result in a strong case that no RHA jurisdiction now can be or should be exercised. Specifically, the western portion of the site appears to fail the second and possibly the third elements of the District policy. As previously discussed, the 1947 permit indicates that the area identified as "salt evaporating ponds" on the 1940 permit was above MHW at the time of the 1947 permit evaluation, meaning that the third element is not satisfied. The evidence is less direct for the area identified as "reclaimed marsh" in the 1940 permit, but the 1940 permit along with the 2002 Westpoint Marina permit and maps that predate the development of the site all suggest that the "reclaimed marsh" area was above MHW either before the levees were constructed or were made so subsequently, and therefore fails either the second or third elements of the policy, or both. If the Corps were now to try to assert RHA jurisdiction over the western portion of the site, a reviewing federal court likely would rule that the Corps is now estopped from asserting RHA jurisdiction, because the owners of that portion have relied on the District policy that precludes the assertion of jurisdiction since at least 1983, the year in which the policy was promulgated.

Conclusion

The landowners of the Redwood City salt plant site have several strong legal arguments supporting their position that RHA jurisdiction should not be exercised over the western

[22] Calvin Fong, Chief, Regulatory Functions Branch, *Reg. Functions Bull. Memorandum, Regulatory Function's Policy on Section 10 Jurisdiction Behind Dikes (Levees)* (May 25, 1983) (emphasis in original; internal citations omitted).

portion of the stie. There is substantial evidence that would receive deference from the Federal courts that any RHA jurisdiction that may have existed over the western portion of the site was surrendered, or alternatively that jurisdiction should not be exercised based on long-standing District policy. Therefore, as a matter of judgment and risk calculation, based on the specific facts and history discussed above, which are unique to the site, the Corps shall decline to assert any RHA jurisdiction that it may be able to claim over the western portion of the Redwood City site.

Earl H. Stockdale
Chief Counsel

Attachment A:

Analysis of Redwood City Salt Plant Site Elevations and Crystallizer Construction Plan

("Josselyn Analysis")

Michael Josselyn, PhD PWS
WRA, Inc.

August 29, 2012

Attachment 6

Attachment A:

Analysis of Redwood City Salt Plant Site Elevations and Crystallizer Construction Plan

Prepared by:
Michael Josselyn, PhD PWS
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2169 E Francisco Blvd Suite G
San Rafael, CA 94901

August 29, 2012

In the U.S. Army Corps of Engineers (Corps) San Francisco District's letter of July 31, 2012, the District requested a description of the historical and current elevations of the Redwood City Salt Plant (Salt Plant or site) and an analysis of the crystallizer construction plans included with the Redwood City Salt Plant Approved Jurisdictional Determination Submission (May 30, 2012) (hereinafter May 30, 2012, submission). In sum, and consistent with my earlier report, Topographic Sheets Denote Marsh Elevations Above Mean High Water (Feb. 27, 2012), included as Exhibit 7 to the May 30, 2012, submission, the Redwood City site in its historic state was above mean high water (MHW). By virtue of site construction, including the grading associated with the crystallizer construction, and agricultural practices in surrounding areas, the site elevation has been lowered over the years.

Redwood City Salt Plant elevations in the unobstructed, natural state

To discern the elevations of the Redwood City Salt Plant in its "unobstructed, natural state," one must refer to the historic record. For much of the site, the unobstructed, natural state ceased to exist beginning in 1901, as discussed below. As indicated in Exhibit 7 to the May 30, 2012, submission, in the late 1800s, prior to conversion of the site for salt-making operations, the majority of the site was marshland at or above MHW, most likely at mean higher high water (MHHW). This conclusion is supported by several important pieces of evidence that are explained in Exhibit 7 to the May 30, 2012, submission.

First, scientific literature describes historic and present day tidal marsh surfaces as occurring near MHHW in the San Francisco Bay area[1]. This is due to the fact that, over time, suspended sediment in Bay water settles onto the marsh surface, raising the surface of the marsh plain so that eventually, as the duration of the inundation decreases, less sediment is deposited and the equilibrium condition is reached between MHW and MHHW. Exhibit 7 to May 30, 2012, submission at 1. Second, in the early 20th century, the U.S. Coast and Geodetic Survey (USCGS) instructed its field staff to draw the edge of the marsh with a line to depict MHW. *Id.* at 2. USCGS emphasized that the MHW line was "one of the most important features of the sheet" and directed field staff to locate the high water line as carefully as

[1]B. F. Atwater, S. G. Conard, J. N. Dowden, C. W. Hedel, R. L. MacDonald, W. Savage. 1979. History, landforms, and vegetation of the estuary's tidal marshes. In Conomos, T. (ed). San Francisco Bay: The Urbanized Estuary. Pacific Division AAAS.

possible. *Id.* Third, it was the official practice of the USCGS surveys to map the edge of marsh vegetation at MHW using a solid black line. *Id.* The solid black line, therefore, separated the marsh areas that were considered above MHW from the mudflats, open bay waters, and sloughs that were considered below MHW. *Id.* Fourth, the 1940 Corps permit issued for construction of the Salt Plant designated the marsh plain as at MHHW[2].

All of this evidence, explained more fully in Exhibit 7 to the May 30, 2012, submission, demonstrates that the majority of the Redwood City Salt Plant was at or above MHW in its unobstructed, natural state.

Elevation changes following the construction of the salt evaporators and levees by West Shore and Redwood City Saltworks.

The construction of the salt evaporators and the accompanying levees for the West Shore and Redwood City Saltworks occurred in 1901 and 1902 on the western portion of the present day Redwood City Salt Plant. The construction of the levees was from muds extracted from within the salt evaporators adjacent to the levees and would have immediately artificially altered the elevations in the location of the borrow areas. However, several other non-natural processes also affected elevations within the evaporators.

The construction of the levees around the salt evaporators removed these areas from daily tidal action and curtailed the marsh surface building processes through reduced mineral sediment supply[3]. Tidal action and the suspended sediments that it deposits on the marsh surface naturally maintain the marsh plain above mean high water. Once placed into salt production, sediment would no longer be deposited on the mud surface within the evaporators.

In addition, land subsidence in the region due to ground water extraction for agricultural production in the southern portion of San Francisco Bay resulted in substantial declines in the land surface ranging between 1 to 8 feet, with the greatest subsidence occurring in Santa Clara County. Most of this subsidence occurred between the 1930s and the 1960s. In the Redwood City region, this accounted for between 0.3 to 1.5 feet of subsidence[4].

Finally, the movement of brines into and out of the solar evaporator ponds constructed in 1901 and 1902 resulted in periodic desiccation of the bay muds. This increased the rate of organic matter decay by exposing it to oxygen in the air. Oxygen allows bacterial decay to increase and the loss of organic matter causes the Bay mud to lose volume, thereby resulting in a lowering of the former marsh surface. In the Sacramento-San Joaquin Delta, the Corps of Engineers found that this accounted for many feet of elevation loss, with some Delta islands 5 to 20 feet below sea level[5]. While the percent of organic

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[2]*See* War Department Permit Issued to Stauffer Chemical Company (Jan. 16, 1940) ("1940 Permit"), Exhibit 8 to May 30, 2012, submission.

[3]Stralberg D, Brennan M, Callaway JC, Wood JK, Schile LM, et al. (2011) Evaluating Tidal Marsh Sustainability in the Face of Sea-Level Rise: A Hybrid Modeling Approach Applied to San Francisco Bay. PLoS ONE 6(11):

[4]Poland, J.F., and Ireland, R.L. 1988, Land Subsidence in the Santa Clara Valley, California, as of 1982: U.S. Geological Survey Professional Paper 497-F, 61 p.

[5]US Army Corps of Engineers. 1979. Sacramento-San Joaquin Delta Investigation. Sacramento District. CA. 47 pp.

matter in the sediments of south Bay tidal marshes is less than the Delta islands, loss of organic matter by oxidation also contributed to elevation loss once the lands were leveed for salt production.

As a result of these three processes, elevations within the salt evaporators constructed in 1901-2 and when the crystallizers were built 50 years later most likely had already subsided many feet from their original condition near MHHW and these subsided elevations were then recorded on the detailed plans as the existing topography.

Construction of the Crystallizers

The construction of the crystallizers in the 1950's resulted in the excavation of the former salt evaporators to create a flat, compacted and engineered sloped bed for the precipitation and mechanical harvesting of salt and to allow for gravity movement of the brines from the pickle ponds. The lowering of the elevations was part of the industrial development of the site and enabled Leslie Salt to efficiently move brines into the crystallizers and to produce and harvest salt.

Explanation of the Elevations on the Crystallizer Construction Plans

Exhibit 10 to the May 30, 3012, submission included two enlargements from the Leslie Salt Co. Redwood City Plant Crystallizer Ponds Grading & Fencing Plan (Mar. 16, 1949) (hereinafter "Crystallizer Construction Plan"), included here as Exhibit 1. The Crystallizer Construction Plan shows elevations in feet related to mean sea level U.S.C.& G.S datum (MSL)[6]. The decimal point is left out of the elevation designation and in some cases, the decimal point designation is shown as a superscript. For example, an elevation of 166 or 1^{66} on the crystallizer plan indicates an elevation of 1.66 ft above MSL.

The rectangular grid under the drawing represents the existing topography of the crystallizer area before the construction of the crystallizers. These elevations range between 1.0 to 2.4 ft above MSL[7], and represent the elevation after 50 years of salt production. The elevations on the diagonal lines represent the elevations planned for construction and range between 0.2 and 1.3 ft above MSL. By comparing individual elevation points, the construction of the crystallizers required a lowering of between 1 to 2 feet below the existing elevation at that time to allow for gravity movement of brines into the crystallizers.

Purpose of excavations to construct crystallizers

As explained above, the plans show that the site was lowered throughout the crystallizer area to allow for the transport of brines by gravity into the crystallizers and the drawdown of bitterns after the salt precipitated out of the brines. Crystallizers 1-4 were designed to move the brines via gravity to a central

[6] MSL is likely the "standard mean sea level at San Francisco" which refers to a datum specifically determined at the Presidio at the Golden Gate tide gauge. It is not the same as the National Geodetic Vertical Datum of 1929 (NGVD29). NGVD29 was determined from 26 stations across the country based on first order leveling techniques and, in San Francisco Bay, mean sea level is between 0.1 and 0.3 feet above NGVD29.

[7] An area in the southeastern portion has elevations indicated by -1.0 feet below MSL and may be a result of the original construction of the salt evaporators in 1901 where borrow material may have been removed to create the levees.

ditch on their southern ends and Crystallizers 5-9 were designed to move the brines via gravity to a central ditch to the north. Therefore, each crystallizer has an internal elevational gradient of 0.5 to 1 foot to allow for this bittern removal. The end result was a lowered elevation within the crystallizer area in comparison to the previous condition as a salt evaporator.

Recent Elevations of the Redwood City Salt Plant

A number of recent spot elevations have been taken within the Redwood City Salt Plant that are provided with this report. These elevations are all taken relative to NGVD29 and are shown as the elevation plus 100. Therefore, a reading of 105.3 would mean 5.3 feet above NGVD29.

The elevations for the maintained external and internal levees are taken at specific locations as shown in Exhibit 2, Elevations of Existing Levees at Redwood City Salt Plant (Aug. 22, 2012). These levees are regularly maintained by Cargill as part of its normal operations. The elevations within the various salt production basins are based on limited data taken in January 2012 and are averaged over the bottom of those basins, as shown in Exhibit 3, Elevations of Crystallizer Beds, Bittern Ponds, and Pickle Ponds at Redwood City Salt Plant (Jan. 17, 2012). The elevations shown represent a snap shot in time as the site is actively managed for salt production. The deposition of salt within the crystallizers and other ponds and its subsequent harvest can alter elevations by several feet. In addition, deposition of other salts through the plant site can alter elevations from year to year.

Conclusion

The elevations observed today within the crystallizer system are far different than those that existed when the tidal marsh existed at this location prior to construction of the site in the early 1900s. At that time, the marsh surface was at Mean High Higher Water as were most tidal marshes in San Francisco Bay in their unobstructed, natural state. The construction of the first solar evaporators and levees, and the subsequent excavation of the crystallizers have resulted in a significant lowering of the ground surface within the crystallizer area due to effects related to placing these areas into industrial salt production use. These changes were solely related to the consequences of the salt making process to retain and move brines within the Salt Plant and to eventually lead to the production of sodium chloride and other solar salt by-products. The combined influence of all these factors resulted in a lowering of the surface from its unobstructed, natural state above MHW prior to 1901 to the elevations that are observed today in the industrial plant site.

Exhibit 1:

Leslie Salt Company Redwood City Plant
Crystallizer Ponds Grading and Fencing Plan

("Crystallizer Construction Plan")

March 16, 1949

Exhibit 1 is a large plan and is available as a separate file.

Exhibit 2:

Elevations of Existing Levees at Redwood City Salt Plant

August 22, 2012

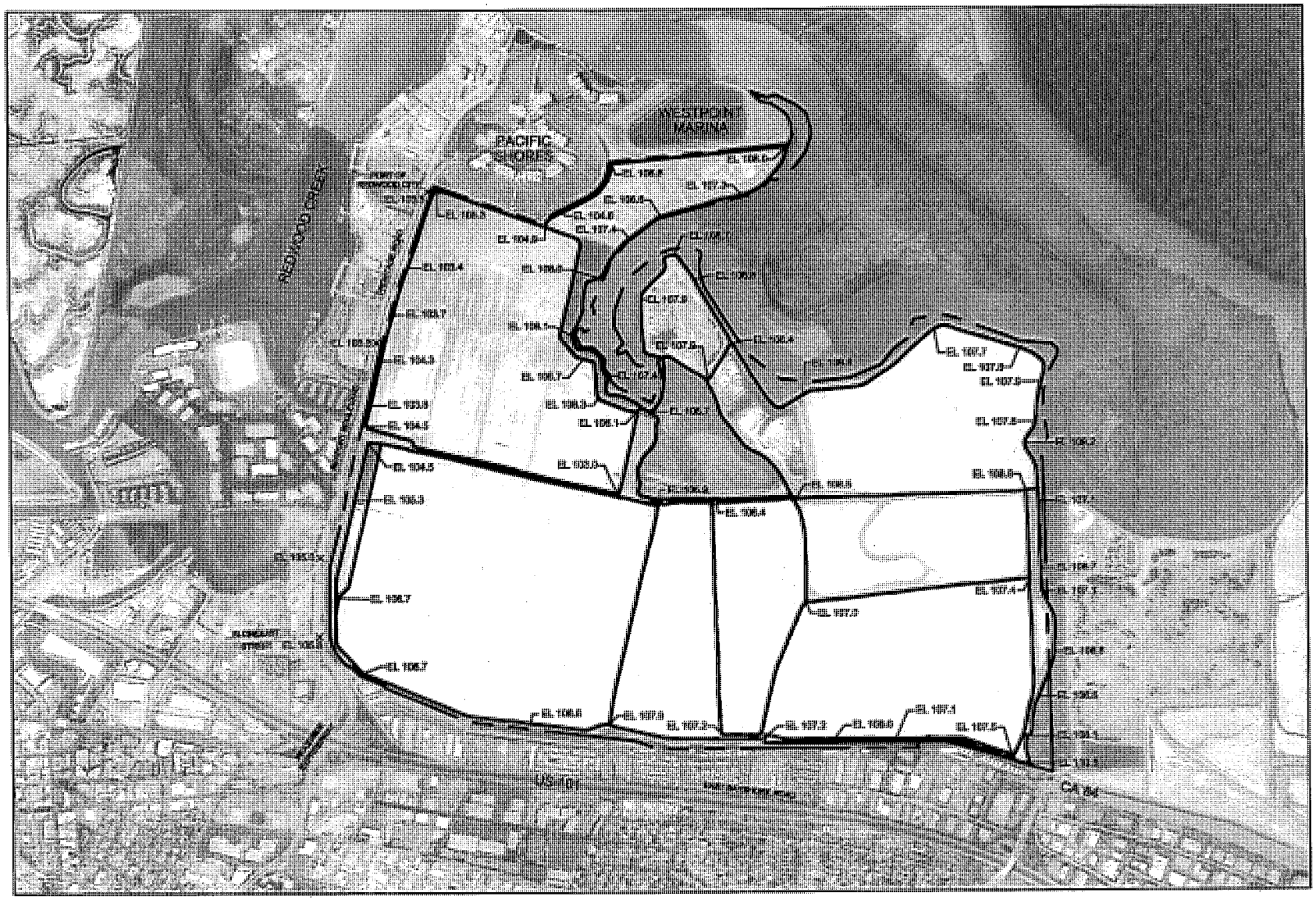

Exhibit 2: Elevations of Existing Levees at Redwood City Salt Plant

AUGUST 22, 2012

Exhibit 3:

Elevations of Crystallizer Beds, Bittern Ponds, and Pickle Ponds at Redwood City Salt Plant

January 17, 2012

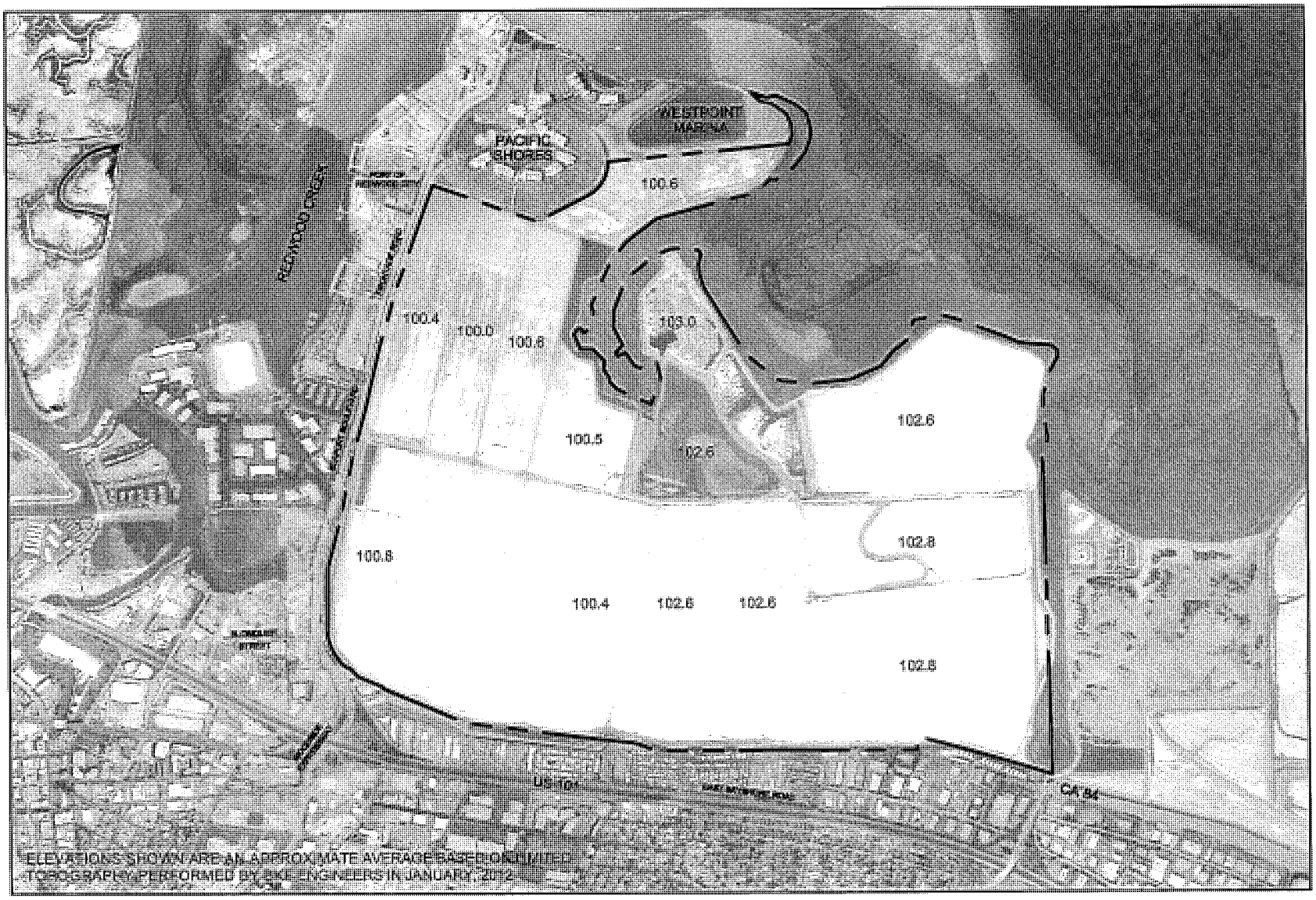

Exhibit 3: Elevations of Crystallizer Beds, Bittern Ponds and Pickle Ponds at Redwood City Salt Plant

JANUARY 17,2012

WAR DEPARTMENT
UNITED STATES ENGINEER OFFICE
401 Custom House
San Francisco, California

No. 22.

PUBLIC NOTICE

December 9, 1939.

D. J. K. ✓ R. N. N.
F. W. W. ✓ L. F. C.

REC'D DEC 11 1939

ANS.

TO WHOM IT MAY CONCERN:

Application has been made by the Stauffer Chemical Company, 636 California Street, San Francisco, California, for a War Department permit to construct a small earth dam, 10 feet wide on top and about 325 foot long, across First Slough, approximately 3,900 feet southeasterly from the Pacific Portland Cement works, which is located near the mouth of Redwood Creek, San Mateo County, California; also construct about three miles of earth levee from the proposed dam extending along the southerly bank of Westpoint Slough, to a point near the electric power line serving the cement works and Stauffer Chemical Company, thence westerly along said power line, and connecting with existing levee of the salt evaporating ponds of the applicant.

A permit issued by the War Department does not give any property rights, either in real estate or material, or any exclusive privileges, and does not authorize any injury to private property or invasion of private rights, or any infringement of Federal, State, or local laws or regulations; nor does it obviate the necessity of obtaining State assent to the work authorized. It merely expresses the assent of the Federal Government so far as concerns the public rights of navigation.

Drawings showing the location and plan of the proposed work may be seen at Room 120 Custom House, San Francisco, California, until 11:00 A.M., December 19, 1939. Interested parties are invited to inspect those drawings and to submit in writing, in triplicate, on or before said date, any objections based on the interests of commerce and navigation that they may have to the proposed work. Objections based on other than the interests of commerce and navigation cannot be considered.

R. C. Hunter,
Major, Corps of Engineers,
District Engineer.

(3)

Attachment 7

Property File Was
S.M. County
Stauffer Chem. Co.

COPY

WAR DEPARTMENT
UNITED STATES ENGINEER OFFICE
401 Custom House
San Francisco, California

No. 22.

December 9, 1939.

PUBLIC NOTICE

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R. C. Hunter,
Major, Corps of Engineers,
District Engineer.

(3)

WAR DEPARTMENT

NOTE.—It is to be understood that this instrument does not give any property rights either in real estate or material, or any exclusive privileges; and that it does not authorize any injury to private property or invasion of private rights, or any infringement of Federal, State, or local laws or regulations, nor does it obviate the necessity of obtaining *State assent* to the work authorized. IT MERELY EXPRESSES THE ASSENT OF THE FEDERAL GOVERNMENT SO FAR AS CONCERNS THE PUBLIC RIGHTS OF NAVIGATION. (See *Cummings* v. *Chicago*, 188 U. S., 410.)

3-5300

PERMIT

OFFICE, CHIEF OF ENGINEERS.
~~United States Engineer Office.~~

January 16, 1940.

Stauffer Chemical Company,
624-638 California Street,
San Francisco, California.

Gentlemen:

Referring to written request dated December 8, 1939, addressed to the District Engineer, U. S. Army, 401 Custom House, San Francisco, Calif., - - - I have to inform you that, ~~upon the recommendation of the Chief of Engineers~~ ~~and~~ under the provisions of Section 10 of the Act of Congress approved March 3, 1899, entitled "An act making appropriations for the construction, repair, and preservation of certain public works on rivers and harbors, and for other purposes," you are hereby authorized by the Secretary of War, - - - - - - - - - to construct an earth dyke or levee across and along the bank of First Slough, and along the banks of Westpoint Slough and an unnamed tributary thereof, - - -

(Here describe the proposed structure or work.)

in Westpoint Slough, -

(Here to be named the river, harbor, or waterway concerned.)

at about 1.0 mile southeasterly of the mouth of Redwood Creek, San Mateo County, California, -

(Here to be named the nearest well-known locality—preferably a town or city—and the distance in miles and tenths from some definite point in the same, stating whether above or below or giving direction by points of compass.)

in accordance with the plans shown on the drawing attached hereto marked "Proposed Dam and Levee East of Redwood Cr., San Mateo County, California, Application by Stauffer Chemical Co., Dated Dec. 1939". - - - - - - - - - - - - - - - - - - -

(Or drawings; give file number or other definite identification marks.)

subject to the following conditions:

6

Incl 5

(a) That the work shall be subject to the supervision and approval of the District Engineer, Engineer Department at Largo, in charge of the locality, who may temporarily suspend the work at any time, if in his judgment, the interests of navigation so require.

(b) That any material dredged in the prosecution of the work herein authorized shall be removed evenly, and no large refuse piles, ridges across the bed of the waterway, or deep holes that may have a tendency to cause injury to navigable channels or to the banks of the waterway shall be left. If any pipe, wire, or cable hereby authorized is laid in a trench, the formation of permanent ridges across the bed of the waterway shall be avoided and the back filling shall be so done as not to increase the cost of future dredging for navigation. Any material to be deposited or dumped under this authorization, either in the waterway or on shore above high-water mark, shall be deposited or dumped at the locality shown on the drawing hereto attached, and, if so prescribed thereon, within or behind a good and substantial bulkhead or bulkheads, such as will prevent escape of the material into the waterway. ~~If the material is to be deposited in the harbor of New York, or in its adjacent or tributary waters, or in Long Island Sound, a permit therefor must be previously obtained from the Supervisor of New York Harbor, Army Building, New York City.~~

(c) That there shall be no unreasonable interference with navigation by the work herein authorized.

(d) That if inspections or any other operations by the United States are necessary in the interests of navigation, all expenses connected therewith shall be borne by the permittee.

(e) That no attempt shall be made by the permittee or the owner to forbid the full and free use by the public of all navigable waters at or adjacent to the work or structure

(f) That if future operations by the United States require an alteration in the position of the structure or work herein authorized, or if, in the opinion of the Secretary of War, it shall cause unreasonable obstruction to the free navigation of said water, the owner will be required, upon due notice from the Secretary of War, to remove or alter the structural work or obstructions caused thereby without expense to the United States, so as to render navigation reasonably free, easy, and unobstructed; and if, upon the expiration or revocation of this permit, the structure, fill, excavation, or other modification of the watercourse hereby authorized shall not be completed, the owners shall, without expense to the United States, and to such extent and in such time and manner as the Secretary of War may require, remove all or any portion of the uncompleted structure or fill and restore to its former condition the navigable capacity of the watercourse. No claim shall be made against the United States on account of any such removal or alteration.

(g) That the United States shall in no case be liable for any damage or injury to the structure or work herein authorized which may be caused by or result from future operations undertaken by the Government for the conservation or improvement of navigation, or for other purposes, and no claim or right to compensation shall accrue from any such damage.

(h) That if the display of lights and signals on any work hereby authorized is not otherwise provided for by law, such lights and signals as may be prescribed by the ~~Bureau of Lighthouses, Department of Commerce,~~ U. S. Coast Guard shall be installed and maintained by and at the expense of the owner.

(i) That the permittee shall notify the said district engineer at what time the work will be commenced, and as far in advance of the time of commencement as the said district engineer may specify, and shall also notify him promptly, in writing, of the commencement of work, suspension of work, if for a period of more than one week, resumption of work, and its completion.

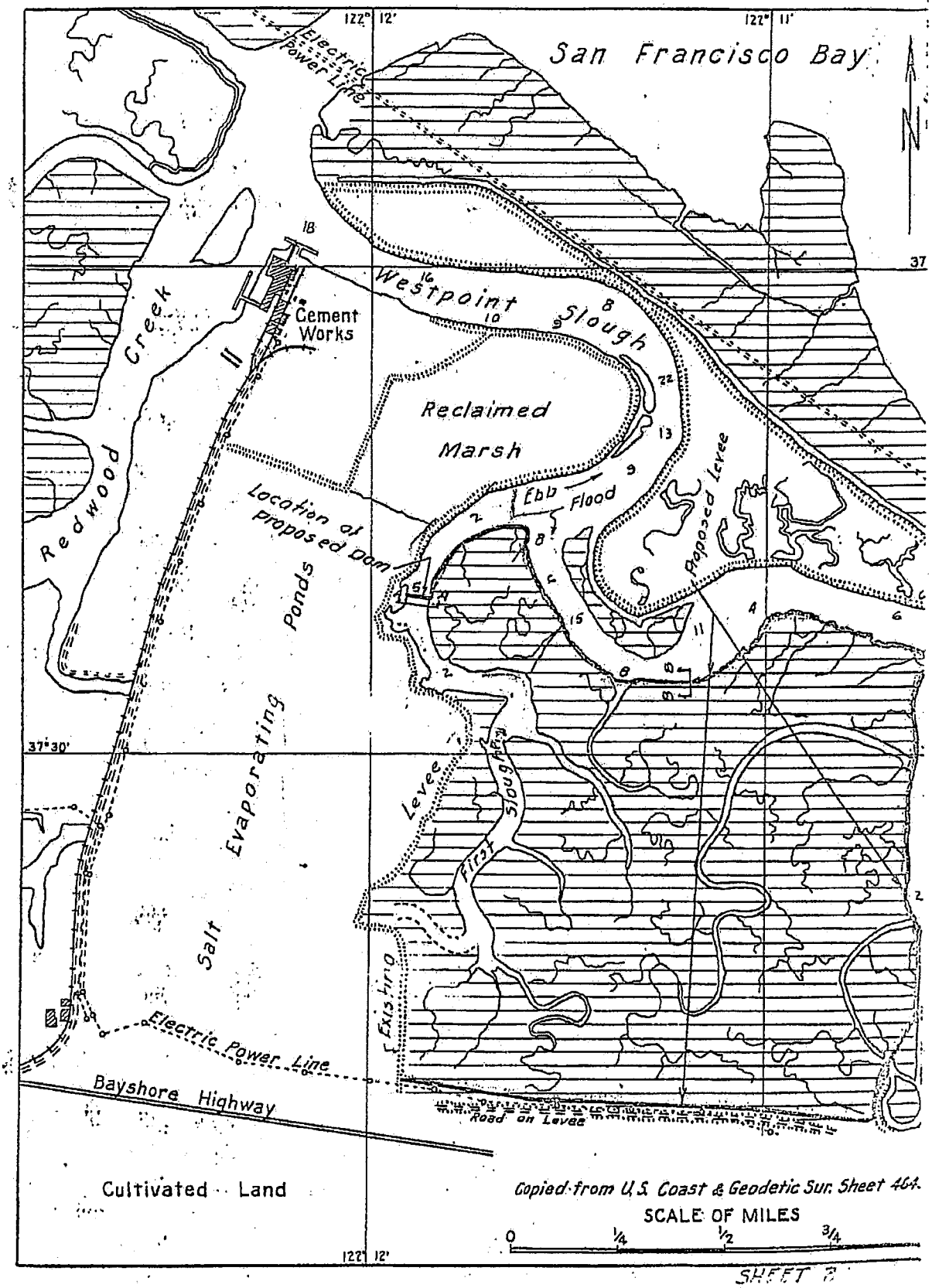
(j) That if the structure or work herein authorized is not completed on or before the 31st day of December, 1942, this permit, if not previously revoked or specifically extended, shall cease and be null and void.

By authority of the Secretary of War:

(S)
Thomas M. Robins,
Brigadier General,
Acting Chief of Engineers.

WAR DEPARTMENT
O. C. of E.
Form No. 96
Revised Jan. 6, 1927
8—8360

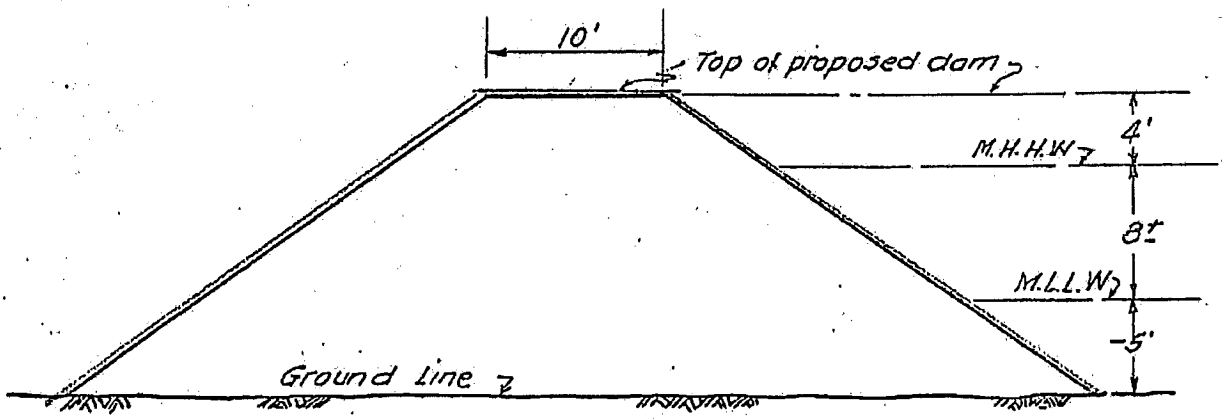
U. S. GOVERNMENT PRINTING OFFICE


122° 12'
122° 11'
San Francisco Bay
Electric Power Line
Cement Works
Redwood Creek
Westpoint Slough
Reclaimed Marsh
Ebb
Flood
Proposed Levee
Location of proposed dam
Salt Evaporating Ponds
Levee
First Slough
Existing
Electric Power Line
Bayshore Highway
Road on Levee
Cultivated Land
37° 30'
37
Copied from U.S. Coast & Geodetic Sur. Sheet 464.
SCALE OF MILES
0
1/4
1/2
3/4
SHEET 2

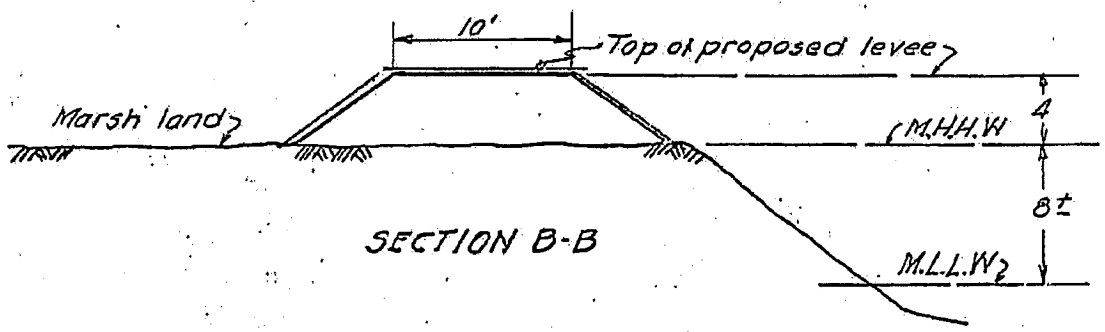
Note

Soundings are in feet and refer to Mean Lower Low Water.

No harbor lines have been established at this locality



SECTION A-A



SECTION B-B

0 1 2

Scale 1 in = 10 Ft.

PROPOSED DAM AND LEVEE
EAST OF REDWOOD CR.
SAN MATEO COUNTY CALIFORNIA

Application by STAUFFER CHEMICAL CO.
Dated Dec. 1939

SHEET 1.

REG. FUNCTIONS BULL. memorandum

REGULATORY FUNCTION'S POLICY
ON
SECTION 10 JURISDICTION BEHIND DIKES (LEVEES)

A. POLICY:

Section 10 jurisdiction will be exercized over areas behind dikes if all of the following criteria are met:

1. The area is presently at or below mean high water (MHW),[1]

2. The area was historically at or below MHW in its "unobstructed, natural state" (i.e. the area was at or below MHW before the dikes were built), and

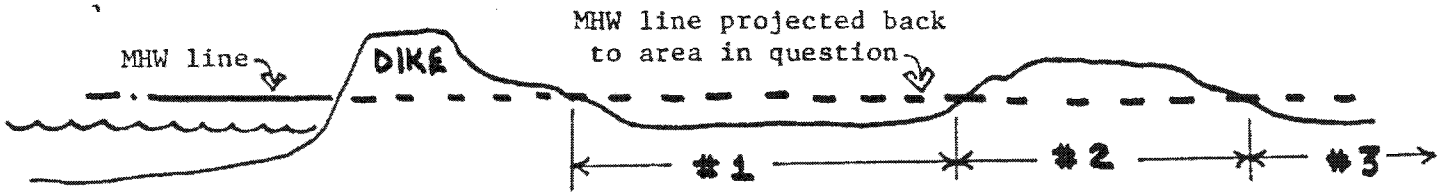
3. There is no evidence (elevation data) that the area was ever above MHW.

B. PROCEDURE FOR DETERMINING SECTION 10 JURISDICTION BEHIND DIKES:

1. First, determine present MHW for the area in question.

a. Use surveyed elevation data from the prospective applicant.

b. If elevation data are not available, use the survey technique for determining MHW on the outboard side of the dike and project the MHW line back to the area in question.



c. Those areas behind dikes that are presently above MHW (e.g. area #2) are not subject to Section 10 permit requirements [provided they were above MHW prior to 18 January 1972 or were filled to above MHW thereafter under Corps permit] because criterion A(1) is not met.

d. Those areas that are presently at or below MHW may be subject to Section 10 permit requirements. To determine whether these areas (#1 and #3) are subject to Section 10, two additional facts must be obtained (see criteria A(2) and A(3)).

1/ Since most of our permit actions involve tidal waters, the term, mean high water, is used here. However, in non-tidal navigable waters of the U.S., the ordinary high (OHW) mark would be used vice MHW.

Attachment 8

REGULATORY FUNCTION'S POLICY: SECTION 10 JURISDICTION BEHIND DIKES (LEVEES)
(Continued)

2. The second step is to determine whether those areas presently at or below MHW, (areas #1 and #3) were historically below MHW before the dikes were built (i.e. criterion A(2) must be met.

a. If available, use elevation data that were surveyed just prior to or just after the dikes were built. More often then not, this information is not available. However, check with the prospective applicant, the city and county planning commissions and public works departments, the State Lands Commission, CALTRANS and other pertinent sources.

b. If historic elevation data are not available, use the T-charts of 1850-1897 to determine the location of the historic sloughs, if any, in those areas that are presently below MHW. The premise is that the historic sloughs were subject to the ebb and flow of the tides and thus were below MHW.

c. Those areas presently below MHW (criterion A(1)) and historically below MHW as determined by 2a or 2b above, would fullfill criterion A(2).

d. If necessary, planimeter the outline of the historic sloughs to determine amount of area that could be subject to Section 10.

3. If A(1) and A(2) are met, we will assume that A(3) is also met. If the applicant can demonstrate through past surveyed data that the area presently below MHW was at one time above MHW (e.g. the area was once filled and due to subsidence, the area is now below MHW), we would not exercize Section 10 authority over that area because A(3) is not met.

C. Fong — May 25, 1983

C. FONG, Chief — DATE
Regulatory Functions Br.

My name is Nate Dougherty and I work for the Surveys, Mapping and GIS section of the US Army Corps of Engineers, Omaha District (NWO). From time to time we provide GIS support for San Francisco District (SPN) Regulatory. We were recently asked to assist in providing acreages of double-sided sloughs within several work areas that were provided by SPN. This document describes the processes used to calculate those areas.

Step 1: Download Historic T-Sheet

The original (non-georeferenced) T-Sheet was downloaded from NOAA's Non-georeferenced NOAA Shoreline Survey Scans page found at:

http://nosimagery.noaa.gov/images/shoreline_surveys/survey_scans/NOAA_Shoreline_Survey_Scans.html

The image was reviewed and contained a coordinate grid. The sheet indicated that coordinates were in were in North American Datum 1927 (NAD27). Additional review during the geoprocessing process supported this finding.

Step 2: Georeference T-Sheet

A new session of ESRI ArcGIS ArcMap was started. The coordinate system for the data frame was changed to NAD27 to match the coordinates that are included on the T-Sheet.

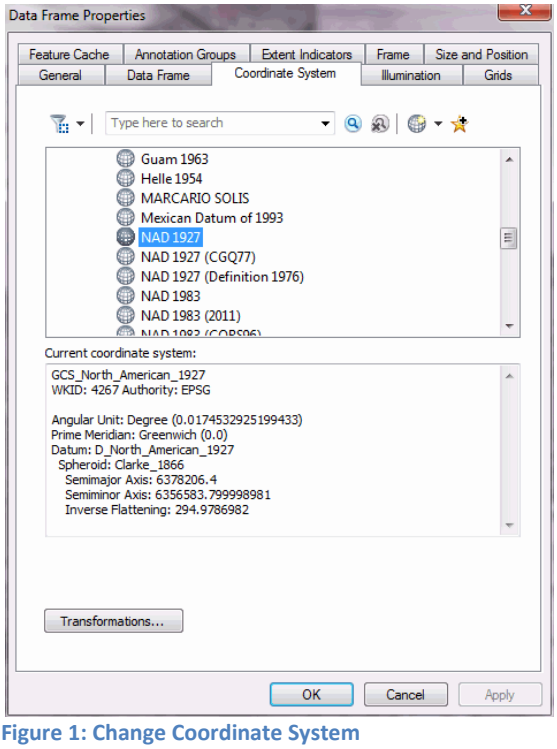


Figure 1: Change Coordinate System

Attachment 9

The non-georeferenced image was then loaded into ArcMap and the Georeferencing Toolbar was activated.

Figure 2: Georeferencing Toolbar

Next, the Fit To Display function was used to make the image visible within the data frame.

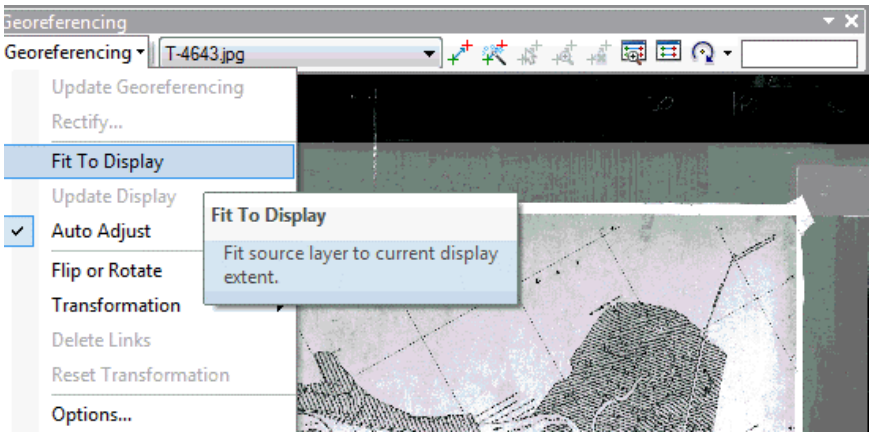


Figure 3: Fit to Display

The Add Control Points feature was used to georeference the T-Sheet. This tool is found on the Georeferencing Toolbar.

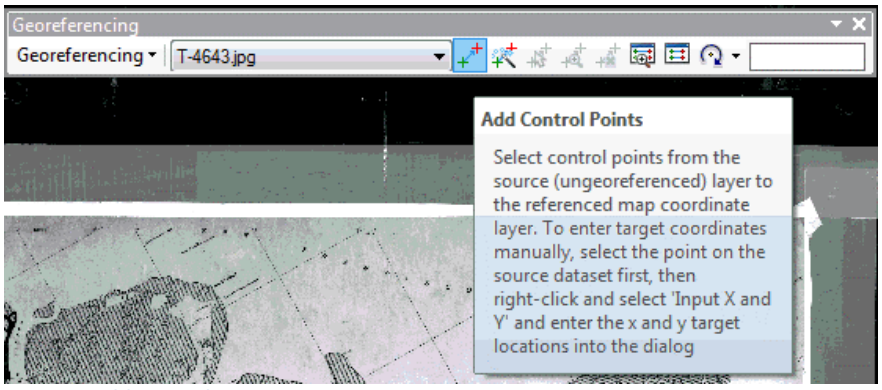


Figure 4: Add Control Points

This tool is used by clicking on one of the coordinate tics denoted on the map. The coordinates of the selected location indicated on the map were entered into the tool box. In this case, I zoomed to a scale of around 1:300 to ensure that the center of the coordinate tic was selected.

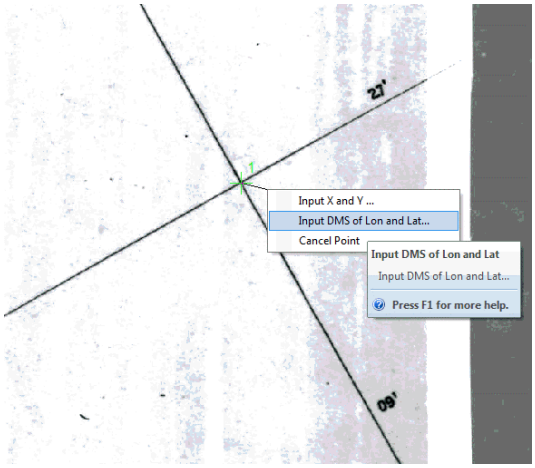


Figure 5: Add DMS of Longitude and Latitude

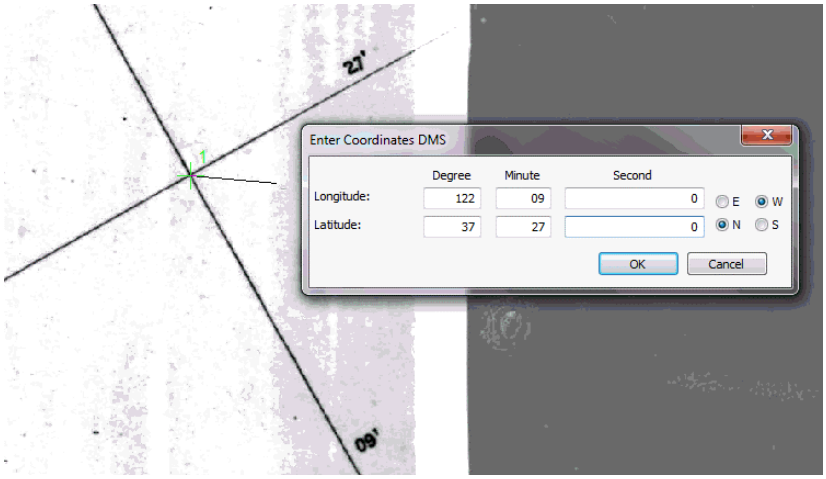


Figure 6: Add DMS of Longitude and Latitude

This step was repeated on 18 different coordinate tic marks at various points around the image.

Figure 7: All Coordinate Marks

The total RMS Error for the georeferenced image was 2.689.

Link

Total RMS Error: Forward:2.689e-005

Link	X Source	Y Source	X Map	Y Map	Residual_x	Residual_y	Residual
1	8768:35:3.523E	3555: 8:31.164S	122: 7:43.320W	37:29:52.710N	8.96608e-006	1.69215e-005	1.91501e-005
2	7963:24:16.0…	2605:53:15.2…	122: 7:59.999W	37:31:0.001N	-1.6202e-005	2.44064e-005	2.92947e-005
3	6529:54:4.061E	7163: 6:47.009S	122:12:0.000W	37:28:0.001N	1.76445e-005	-3.75971e-005	4.15316e-005
4	2892:23:31.6…	4209:35:50.2…	122:13:59.999W	37:31:59.999N	0	-2.7566e-006	2.7566e-006
5	4488:18:58.7…	7064:41:19.5…	122:13:59.999W	37:28:59.999N	-1.59975e-005	-2.05495e-006	1.61289e-005
6	9558:57:13.3…	5461:23:43.7…	122: 7:59.999W	37:28:0.001N	-2.27916e-005	2.78413e-005	3.59804e-005
7	5467:38:7.040E	5262:31:51.3…	122:12:0.000W	37:30:0.000N	2.69385e-005	1.17489e-005	2.93891e-005
8	3732:36:39.4…	7491: 3:28.818S	122:15:0.000W	37:28:59.999N	-2.33743e-005	5.79217e-006	2.40812e-005
9	2669:34:30.0…	5590:36:23.0…	122:15:0.000W	37:31:0.001N	0	5.19181e-005	5.19181e-005
10	3115:16:54.4…	2829:42:12.6…	122:13:0.001W	37:32:60.000N	1.00302e-005	-4.12127e-005	4.24157e-005
11	5693:15:23.6…	3883: 8:50.824S	122:10:59.999W	37:31:0.001N	-4.11663e-006	5.86967e-007	4.15826e-006
12	8043:40:21.3…	6312:38:20.5…	122:10:0.001W	37:28:0.001N	1.33317e-005	-5.41763e-006	1.43905e-005
13	5162: 0:42.876E	2931:21:3.139S	122:10:59.999W	37:31:59.999N	-1.1694e-005	3.96063e-006	1.23465e-005
14	6979:46:11.2…	4408:25:48.0…	122:10:0.001W	37:30:0.000N	1.61035e-005	-1.66594e-005	2.31702e-005
15	4180:33:33.6…	4736:47:11.9…	122:13:0.001W	37:31:0.001N	1.11273e-005	1.86237e-005	2.16947e-005
16	4404:46:13.0…	3356: 0:48.953S	122:12:0.000W	37:31:59.999N	-9.29947e-006	-2.24482e-005	2.42982e-005
17	7205:14:46.2…	3030:11:48.3…	122: 9:0.000W	37:31:0.001N	-1.75292e-006	-1.35895e-005	1.37021e-005
18	9331:48:40.5…	6837:12:3.830S	122: 9:0.000W	37:27:0.000N	0	-2.00634e-005	2.00634e-005

Auto Adjust Transformation: 1st Order Polynomial (Affine)

Degrees Minutes Seconds Forward Residual Unit : Unknown

Figure 8: Link Table

Step 3: Rectify and Reproject Image

The image was then rectified to create a new georeferenced image for use in ArcMap.

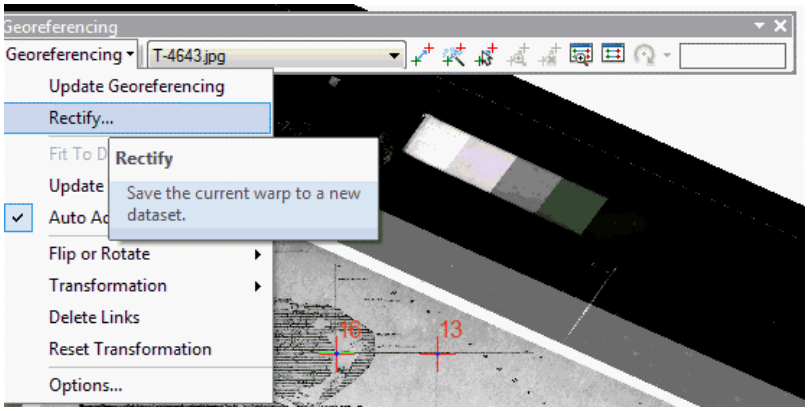


Figure 9: Rectify Image

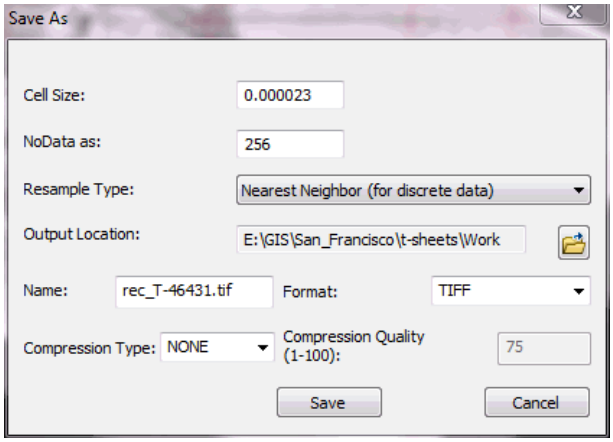


Figure 10: Save Rectified Image

The newly rectified image is loaded into ArcMap.

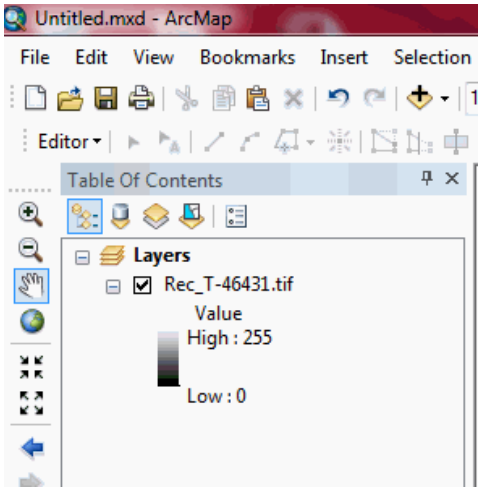


Figure 11: New Image in T.O.C.

All other previous data that was used to calculate area for this project is in the NAD_1983_UTM_Zone_10N projection. A reprojection was performed on the image to match the other data:

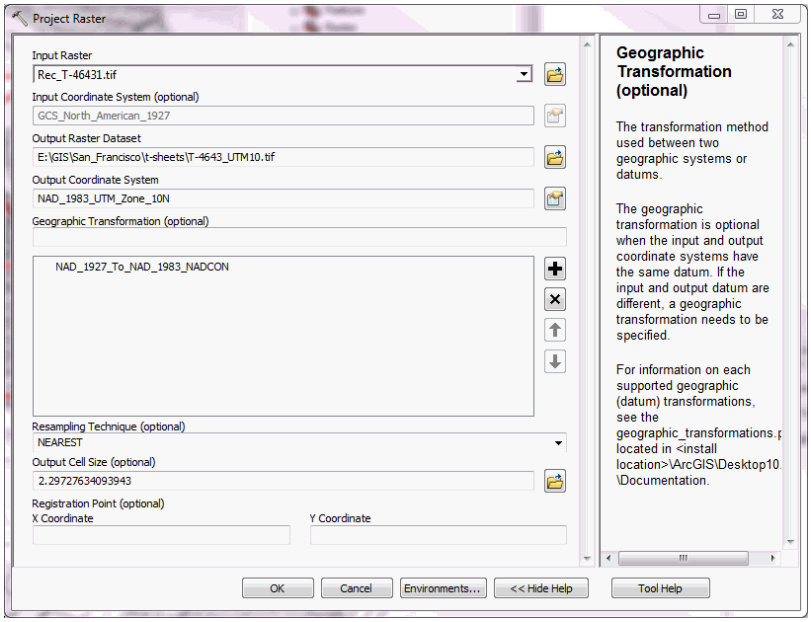


Figure 12: Reproject Image

Step 4: Digitize Sloughs

A new polyline shapefile was created in the NAD_1983_UTM_Zone_10N. Slough outlines were digitized at a scale of 1:2500. Where they coincided, the new lines were snapped at the shapefile boundaries of the existing Areas of Interest polygons that were created during a previous study. This would allow the slough areas to be totaled for each area of interest.

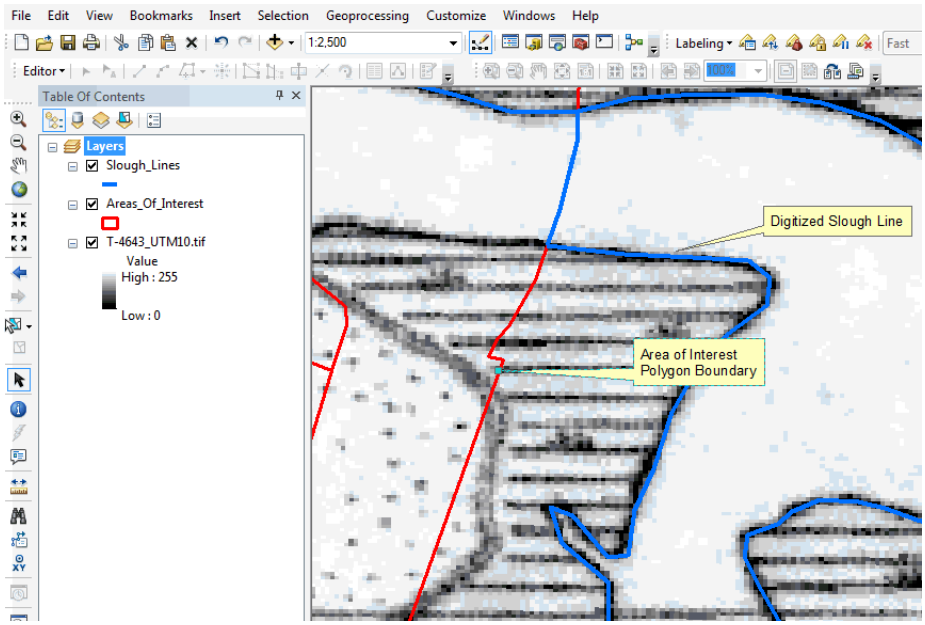


Figure 13: Digitize Slough Boundaries

Next a polygon feature class was created from the digitized line feature class.

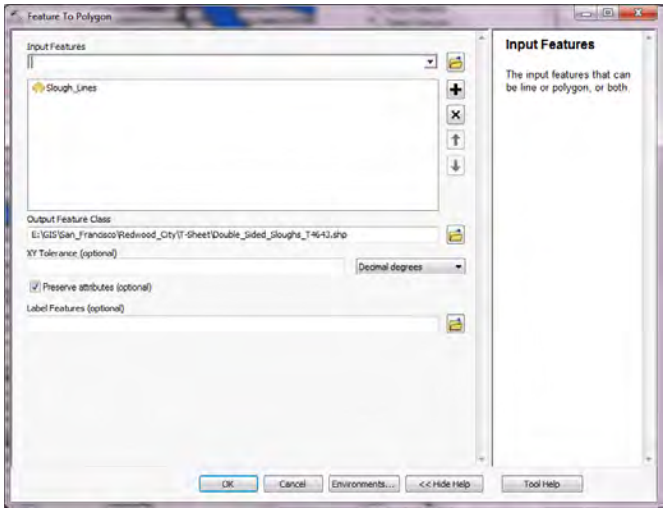


Figure 14: Create Polygon

Step 5: Adding fields and Name Attribute Population

Acreages were then calculated on the new slough polygons shapefile created in the last step.

Two fields were added to the polygon shapefile: Acres and Name. These were created using the Add Field feature.

Figure 15: Add Acres Field

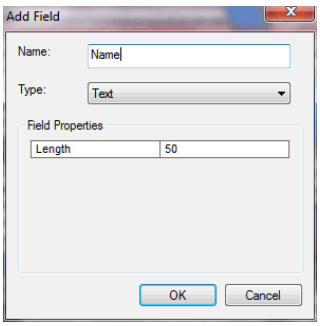


Figure 16: Add Name Field

Next polygons that fall within each area were selected using the Selection Tool in ArcMap.

Figure 17: Select Polygons

The Name field in the attribute table was populated with the appropriate area name.

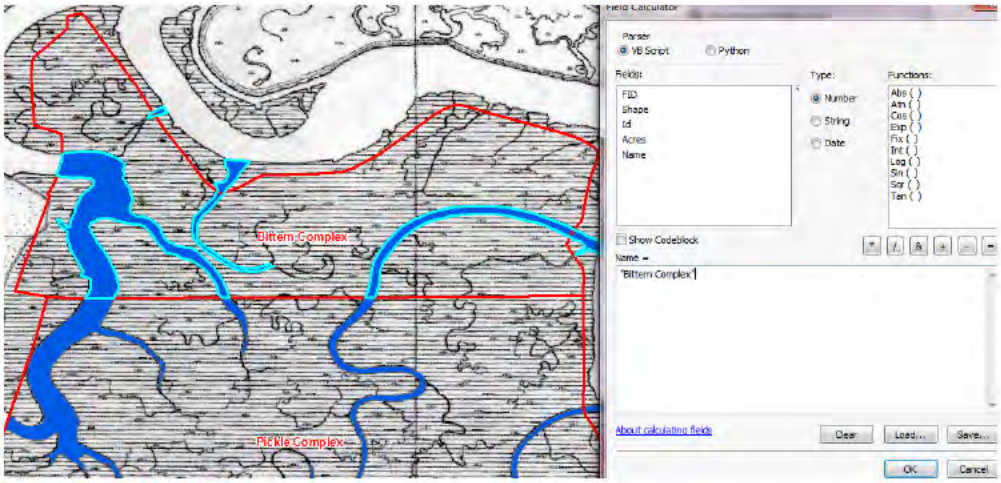


Figure 18: Attribute Name

This step was repeated for the other areas.

Step 6: Calculate Acreages

Acreages were then calculated for all polygons using the Calculate Geometry Feature in the attribute table tools.

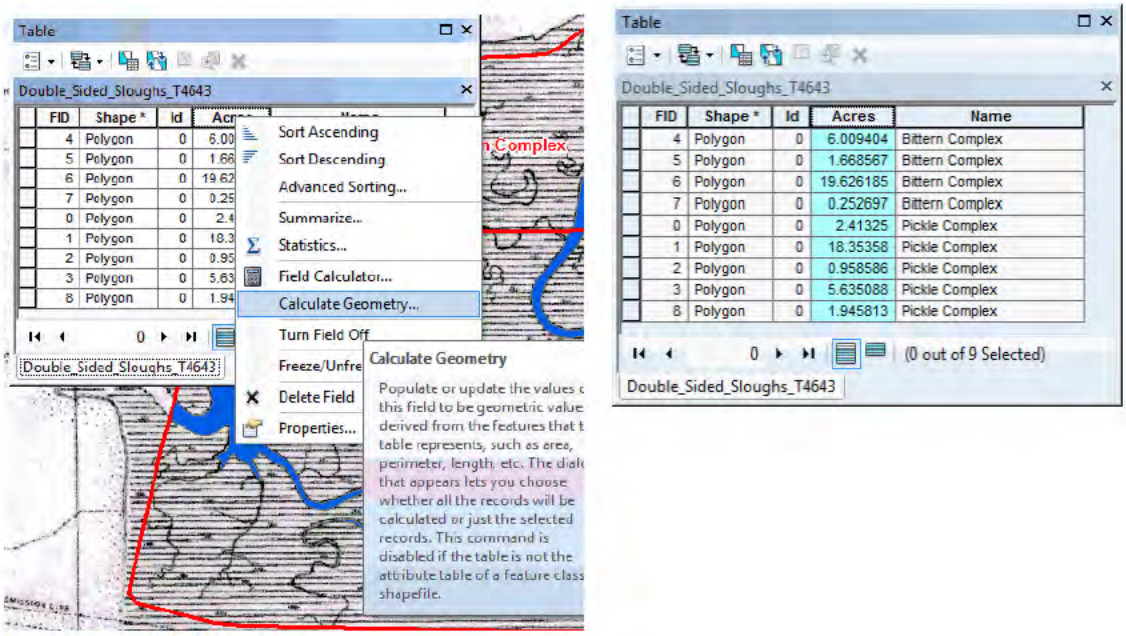


Figure 19: Calculate Geometry

Next, each work area was selected in turn in order calculate area:

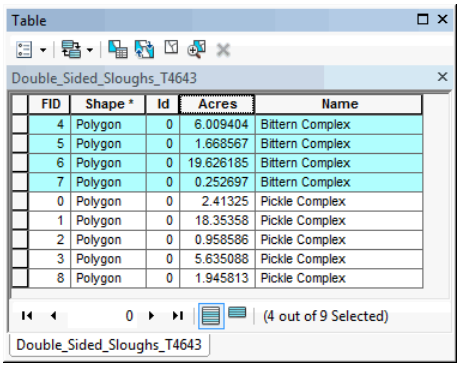


Figure 20: Select by Complex Name

Statistics were run on the Acres field for the selected records. This gives the total acreage for the selected Complex Area.

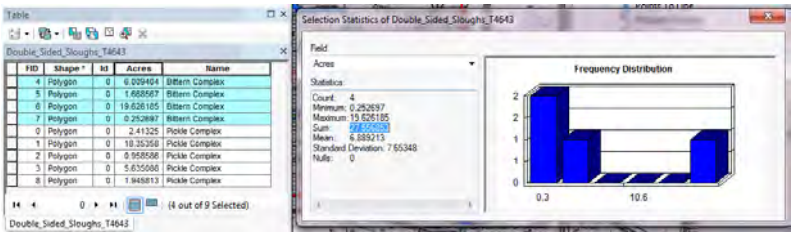


Figure 21: Calculate Statistics

Final Calculated Area Totals:

Area Name	Acres
Bittern Complex	27.56
Pickle Complex	29.31
Total	56.87

Peer Review

I have reviewed the data and methodology that Nate used to conduct this analysis. I find the method used to distinguish the sloughs and the method for attributing the sloughs with the associated complex to be sound. The acreage calculations resultant from the geoprocessing are valid.

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