

**LODI CITY COUNCIL  
SHIRTSLEEVE SESSION  
CARNEGIE FORUM, 305 WEST PINE STREET  
TUESDAY, JUNE 15, 2010**

A. Roll Call by City Clerk

An Informal Informational Meeting ("Shirtsleeve" Session) of the Lodi City Council was held Tuesday, June 15, 2010, commencing at 7:01 a.m.

Present: Council Member Hansen, Council Member Johnson, Mayor Pro Tempore Hitchcock, and Mayor Katzakian

Absent: Council Member Mounce

Also Present: Interim City Manager Bartlam, City Attorney Schwabauer, and City Clerk Johl

B. Topic(s)

B-1 Present Council Update on White Slough Water Pollution Control Facility Waste Discharge Permit (PW)

Interim City Manager Rad Bartlam provided a brief introduction to the subject matter of the White Slough Water Pollution Control Facility Waste Discharge Permit.

Deputy Public Works Director Charlie Swimley provided a PowerPoint regarding the waste discharge permit. Specific topics of discussion included the permit overview, White Slough location, land application facilities, treatment plant, studies for surface water discharge, compliance demonstration plans, temperature study, cost of studies for surface water discharge, studies for land application, Title 22 engineering report, groundwater background study, land application practices report, cost of studies for land application, construction, secondary aeration basins, monthly average nitrate data, historic field nitrogen loadings, tertiary filters, aluminum data, mercury data, ultraviolet (UV) disinfection, biosolids lagoon lining, historic and current biosolids lagoon operations, storage pond nitrogen trends, State Board order, 2012 permit application, biosolids dewatering, and considerations for application of liquid biosolids and biosolids dewatering.

In response to Council Member Hansen, Mr. Swimley stated the regulation on land application reductions also started in May 2010.

In response to Council Member Hansen, Mr. Swimley stated the olives were planted on non-City land north of the facility. Mr. Swimley stated typically the City will grow alfalfa and corn seasonally on the City-owned land.

In response to Council Member Johnson, Mr. Swimley stated the blue lines on the map depict how the fields were prepared for flood irrigation purposes.

In response to Council Member Hansen, Mr. Swimley stated the water for field irrigation comes from treated effluent and can be stored in the ponds or can come from industrial water.

Mr. Swimley stated all municipal water supply is treated and industrial supply is pre-treated.

In response to Mayor Pro Tempore Hitchcock, Mr. Swimley stated water from PCP used to have high amounts of salinity but those amounts have been reduced significantly through PCP's use of potassium instead of sodium.

In response to Council Member Hansen, Mr. Swimley stated the City's quality of effluent is

probably as good as many third world countries. Mr. Swimley stated the water could likely be consumed without causing sickness but legally the water cannot be consumed.

In response to Council Member Johnson, Mr. Swimley stated PCP invested \$300,000 per year to reduce salinity based on the State Board order, community sensitivity, and in an effort to be proactive. Mr. Swimley stated Flag City has also issued a reduction mandate to its customers and made significant improvements.

In response to Council Member Johnson, Mr. Swimley stated that, while the water softening business may continue to decline, other technology to reduce the salinity will likely be introduced in the future.

In response to Mayor Pro Tempore Hitchcock, Mr. Swimley stated the waste from the wineries does contain some nitrates but nothing significant to be concerned about currently.

In response to Myrna Wetzal, Mr. Swimley stated that extreme temperatures do affect the plant and operational adjustments, such as increasing or decreasing the biological matter, are often made as a result.

In response to Council Member Hansen, Mr. Swimley stated unreimbursed regulations do often times drive the cost of the related studies.

In response to Mayor Pro Tempore Hitchcock, Mr. Swimley stated the studies that are specific to Lodi and the County that are not required by all agencies include the Organic Loading Study, Pond Freeboard Study, and Wintertime Irrigation Plan. He stated the studies are fact driven and not complaint driven.

In response to Council Member Hansen, Mr. Swimley stated during the heavy rainfall the City does see spikes of nitrate in the sewer system based on the lack of proper drainage.

In response to Myrna Wetzal, Mr. Swimley stated rainfall does not dilute nitrates.

In response to Mayor Pro Tempore Hitchcock, Mr. Swimley stated in the winter time the change in operations would involve adjustments in the biological process associated with bugs.

In response to Council Member Hansen, Mr. Swimley stated that, while it is difficult to determine where biosolids are being applied and collected, the City can maintain a zero level whereby the fields will not be overloaded by biosolids.

In response to Council Member Johnson, Mr. Swimley stated staff will continue to work on the relationship with surrounding growers because the larger the crop the more financial benefit the City receives and vica versa.

In response to Council Member Johnson, Mr. Swimley stated the City is spending approximately \$300,000 per year for the UV system. City Attorney Schwabauer stated it would be difficult to use public benefit monies for the lightening unless an energy efficiency could be shown.

In response to Myrna Wetzal, Mr. Swimley confirmed that the used light bulbs are sent back to the manufacturer, a discount is not received, and he is not sure if the manufacturer recycles the bulbs thereafter.

In response to Mayor Pro Tempore Hitchcock, Mr. Swimley stated the treatment plant processes and removes nitrates whereby it releases into the air through the biological process.

In response to Mayor Pro Tempore Hitchcock, Mr. Swimley stated that, while he is not sure of the exact amount the 2012 permit application cost, it is likely that it will be expensive.

In response to Council Member Johnson, Mr. Swimley and Mr. Bartlam confirmed that in addition to other regulations San Joaquin County has a prohibition against certain application of biosolids through an ordinance.

In response to Mayor Pro Tempore Hitchcock, Mr. Swimley and Mr. Schwabauer stated there is no legal prohibition against buying land near the facility, there would be financial implications, and purchasing more property would not improve application process because it would only spread out the application.

In response to Council Member Hansen, Mr. Swimley stated that, even if the liquid biosolids were redirected through a pipe instead of irrigation, collection would still occur at point of entry. Mr. Swimley stated staff believes the use of the flinger, which also prepares the City for elimination of biosolids application altogether, is the best solution.

In response to Council Member Hansen, Mr. Swimley stated the water diverted to Northern California Power Agency will remove about 1,000 acre feet but the City processes about 7,000 acre feet per year.

In response to Mayor Katzakian, Mr. Swimley stated while pharmaceuticals remain a concern they are not seeing much in discharge.

In response to Myrna Wetzel, Mr. Swimley stated he is not aware of any concerns regarding health care products being discharged.

In response to Mayor Pro Tempore Hitchcock, Mr. Swimley stated the proposed recommendation will allow for either even distribution on land or an option for trucking out.

In response to Mayor Pro Tempore Hitchcock, Mr. Swimley stated regardless of the Certificate of Participation funds remaining staff would be making the same recommendation with respect to the biosolids application.

C. Comments by Public on Non-Agenda Items

None.

D. Adjournment

No action was taken by the City Council. The meeting was adjourned at 8:20 a.m.

ATTEST:

Randi Johl  
City Clerk

**AGENDA ITEM**



**CITY OF LODI  
COUNCIL COMMUNICATION**

**AGENDA TITLE:** Present Council Update on White Slough Water Pollution Control Facility Waste Discharge Permit

**MEETING DATE:** June 15, 2010 (Shirtsleeve Session)

**PREPARED BY:** Public Works Director

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**RECOMMENDED ACTION:** Present Council update on White Slough Water Pollution Control Facility Waste Discharge Permit.

**BACKGROUND INFORMATION:** The City's White Slough Water Pollution Control Facility (WSWPCF) is currently in the third year of a five-year National Pollutant Discharge Elimination System (NPDES) discharge permit (Permit) cycle. The current Permit was issued in September 2007 by the State Regional Water Quality Control Board and includes more stringent water quality requirements and a significant number of reports and studies related to the facility's discharges to surface water and to land application areas.

Staff will provide a summary of the Permit requirements, current and anticipated expenditures resulting from the Permit requirements, discussion regarding biosolids dewatering, status of the State Board Order, and a brief summary of how WSWPCF is performing since the Phase 3 Improvements were completed.

**FISCAL IMPACT:** Not applicable.

**FUNDING AVAILABLE:** Not applicable.

F. Wally Sandelin  
Public Works Director

Prepared by Charles E. Swimley, Deputy Public Works Director-Utilities

FWS/CES/pmf

cc: Charles E. Swimley, Deputy Public Works Director - Utilities  
Del Kerlin, Wastewater Treatment Superintendent  
Mike Schafer, Laboratory/Environmental Compliance Superintendent  
D. Stephen Schwabauer, City Attorney

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**APPROVED:**

Bartlam, Interim City Manager

# City of Lodi Water Pollution Control Facility



## *Permit Status Update*

June 15, 2010

# Presentation Outline

Permit Overview

Surface Water Discharge Studies

Land Application Studies

Performance Status Report

What's Next?

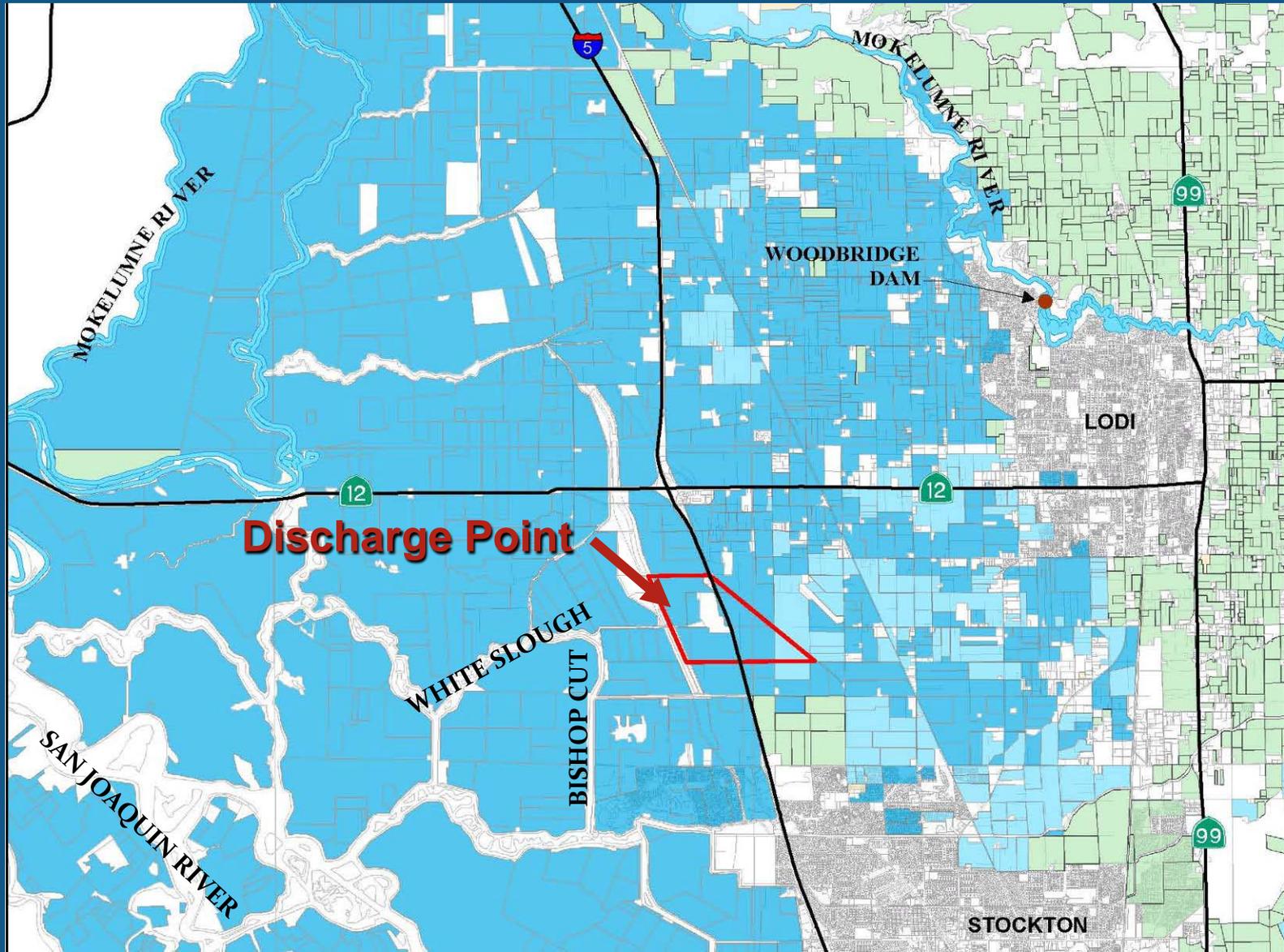




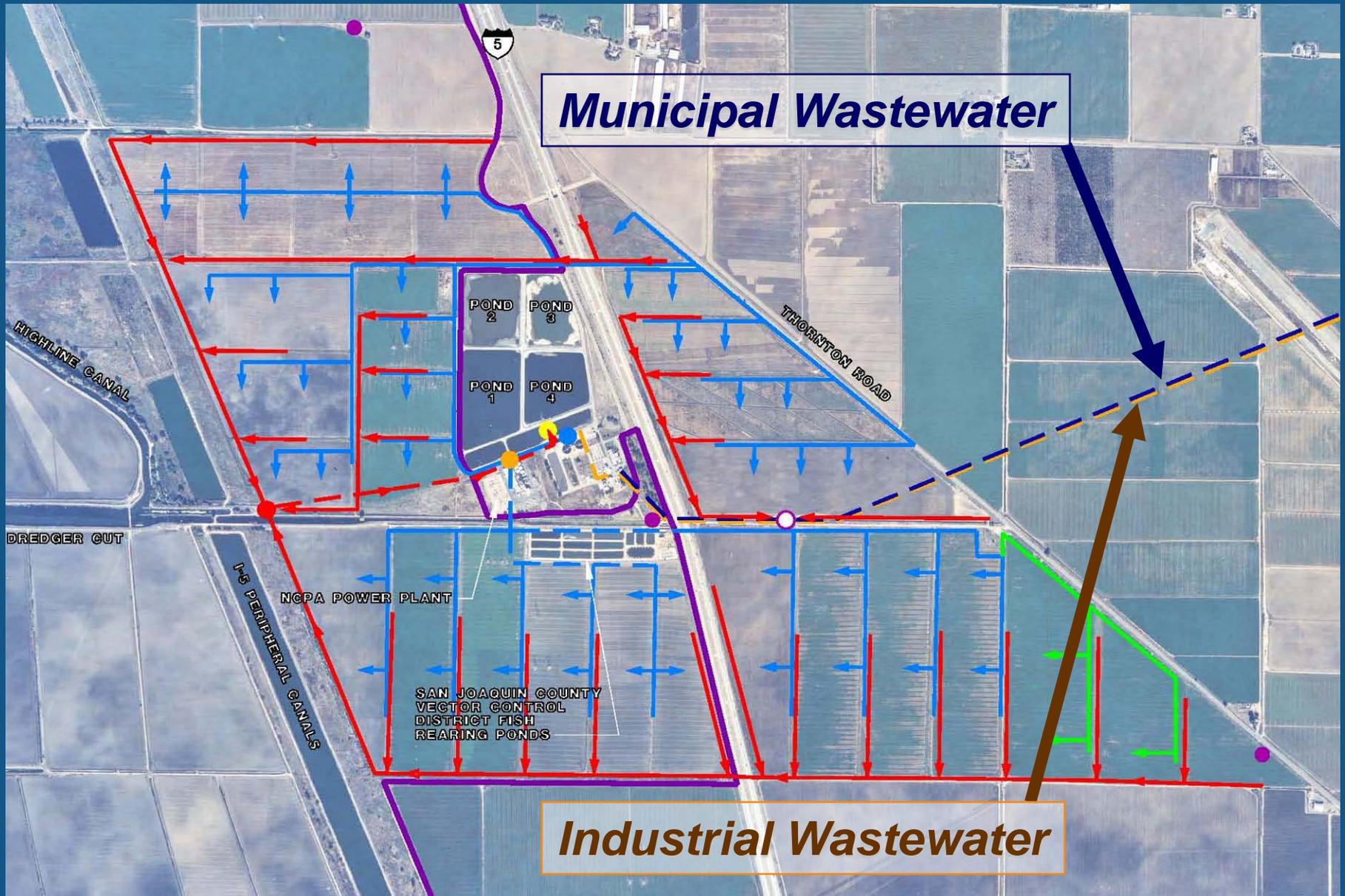
# Permit Overview

- Adopted September 2007
- New standards for surface water discharge apply May 18, 2010
- Increased Regulation on Land Application
- Permit expires September 1, 2012
- Application for new permit due March 4, 2012

# White Slough Location



# Land Application Facilities



# Treatment Plant



# Presentation Outline

Permit Overview

**Surface Water Discharge Studies**

Land Application Studies

Performance Status Report

What's Next?



# Studies For Surface Water Discharge

Study Name	Due Date
Corrective Action/Method of Compliance Plan	May 2008 ✓
Salinity Evaluation and Minimization Plan	November 2008 ✓
Temperature Study	July 2010
Pollution Prevention Plan	September 2010
Treatment Feasibility Study	July 2011
Effluent and Receiving Water Characterization Study	Submit With New Permit Application (March 4, 2012)



# Compliance Demonstration Plans

Treatment Feasibility Study

Pollution Prevention Plan

Corrective Action/Method of Compliance Plan ✓

Salinity Evaluation and Minimization Plan ✓

# Temperature Study

- Study complete
- Discharge has *very* limited effect on temperature
- Identifies appropriate temperature requirements for receiving water



# Cost of Studies For Surface Water Discharge

Study Name	Cost To Date	Future Budget Estimate (To Sept. 2012)
Corrective Action/Method of Compliance Plan	\$10,100	N/A
Salinity Evaluation and Minimization Plan	2,900*	\$11,000*
Pollution Prevention Plan	16,800*	20,000*
Temperature Study	58,000	4,500
Treatment Feasibility Study	6,700	20,000
Effluent and Receiving Water Characterization Study	5,800*	N/A
<b>Total</b>	<b>\$100,300</b>	<b>\$55,500</b>

\*Costs shown do not include fees for laboratory analyses

# Presentation Outline

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Surface Water Discharge Studies

**Land Application Studies**

Performance Status Report

What's Next?

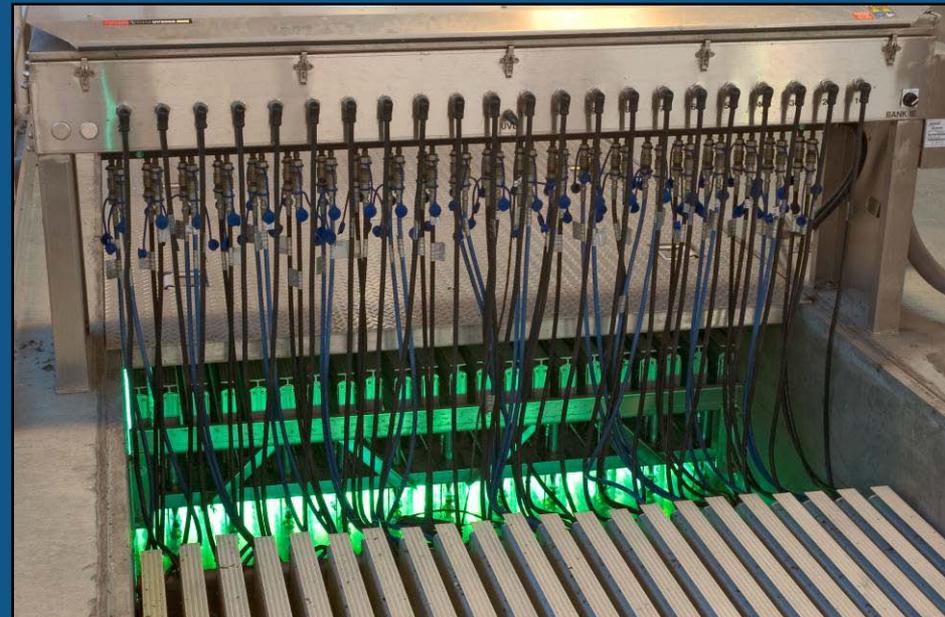


# Studies For Land Application

Study Name	Due Date
Wintertime Irrigation Plan	December 2008 ✓
Organic Loading Study	July 2009 ✓
Salinity Evaluation and Minimization Plan	November 2008 ✓
Title 22 Engineering Report	November 2009
Groundwater Background Study	August 2010
Industrial Influent Characterization Study	November 2010
Pond Freeboard Study	July 2011
Land Application Practices Report (Due March 4, 2012)	Submit With Permit Application

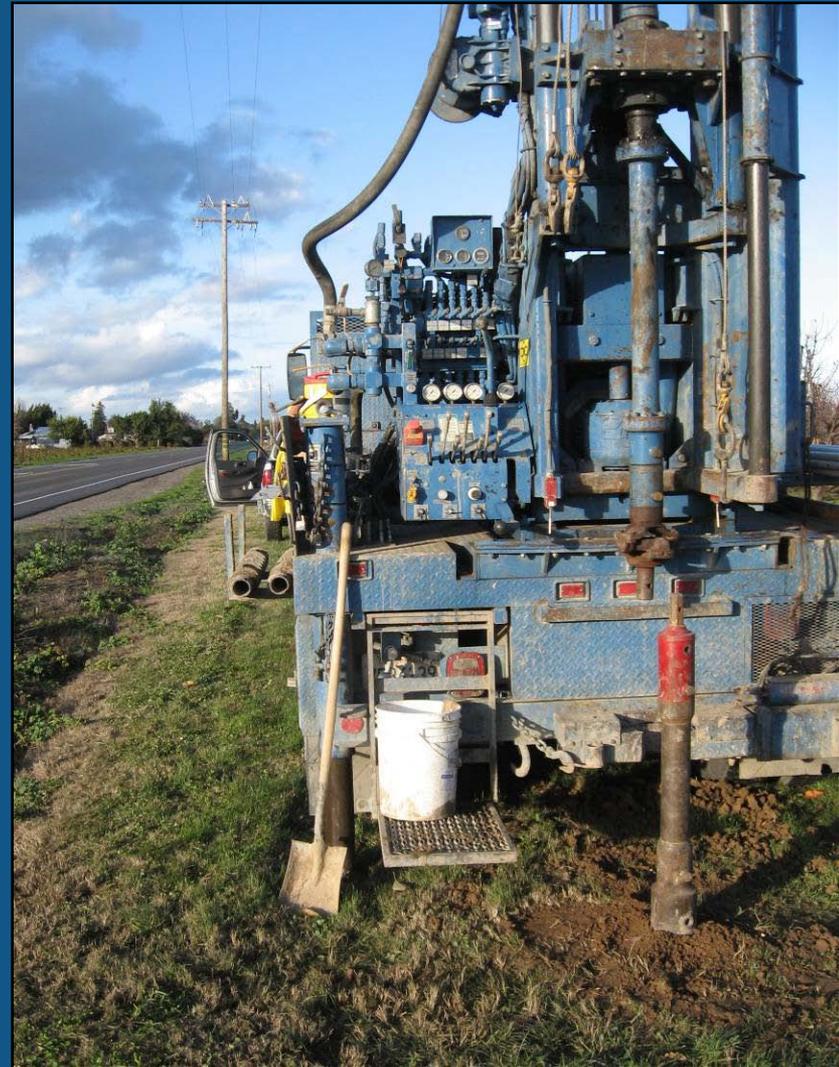
# Title 22 Engineering Report

- Report complete
- Recycled water meets DPH “Title 22” standards
- Report in review by CDPH
- Minor system modifications needed



# Groundwater Background Study

- Study underway
- Required to demonstrate Basin Plan compliance (and Title 27 exemption)
- Required for all land application facilities



# Land Application Practices Report

- Study to begin Fall 2010
- Required to demonstrate Basin Plan compliance (and Title 27 exemption)
- Nitrate is a concern
- Good land application practices must be documented



# Cost of Studies For Land Application

Study Name	Portion of this paid by PCP	Cost To Date	Future Budget Estimate (To Sept. 2012)
Wintertime Irrigation Plan		\$14,800	N/A
Organic Loading Study		336,300	N/A
Salinity Evaluation and Minimization Plan		2,900*	\$11,000*
Title 22 Engineering Report		136,800	5,000
Groundwater Background Report		24,500*	85,000*
Industrial Influent Characterization Study		10,500*	20,000*
Pond Freeboard Study		42,700	15,000
Land Application Practices Report		N/A	100,000
<b>Total</b>		<b>\$568,500</b>	<b>\$236,000</b>

\*Costs shown do not include fees for laboratory analyses

# Presentation Outline

Permit Overview

Surface Water Discharge Studies

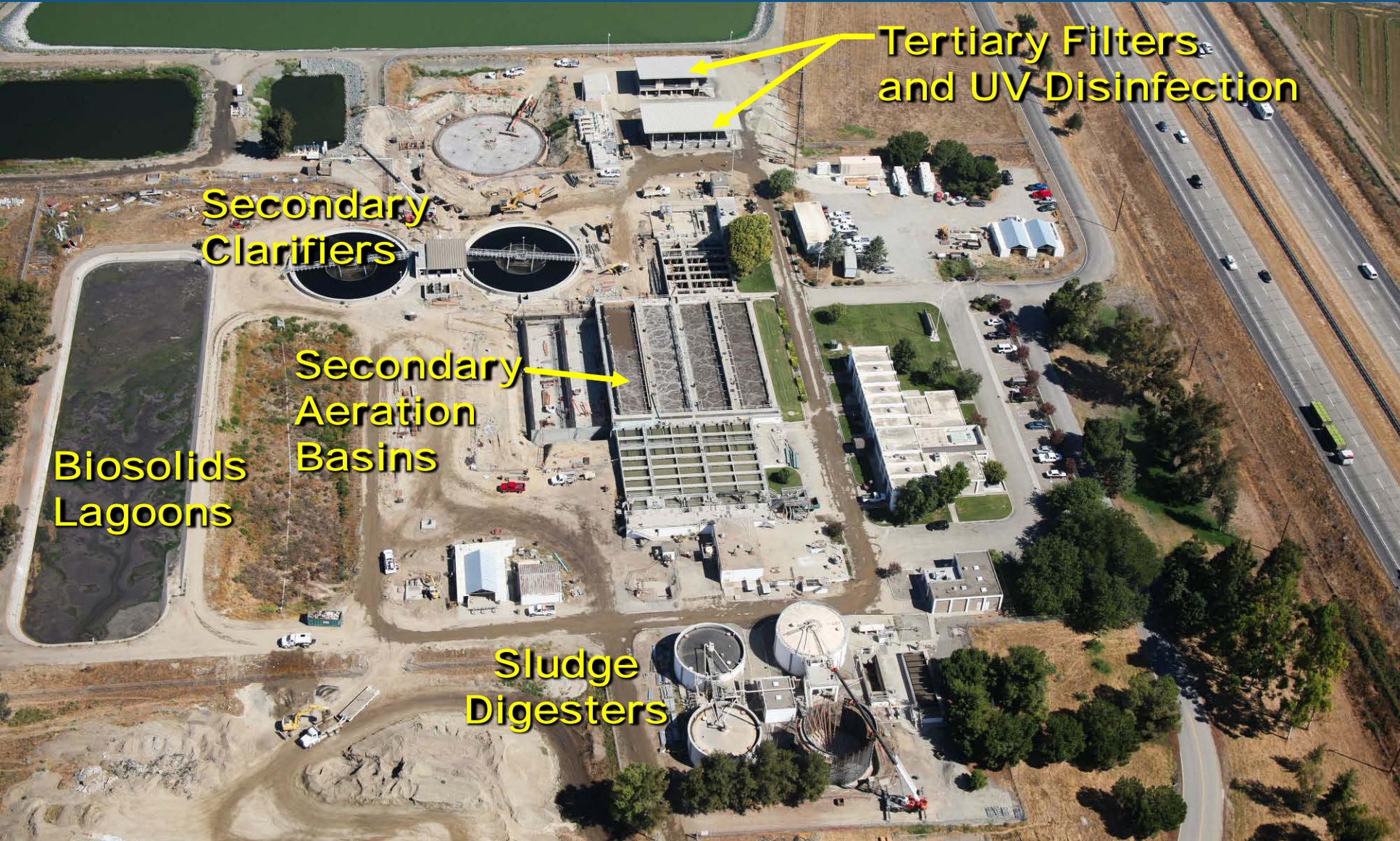
Land Application Studies

**Performance Status Report**

What's Next?



# During Construction



Tertiary Filters and UV Disinfection

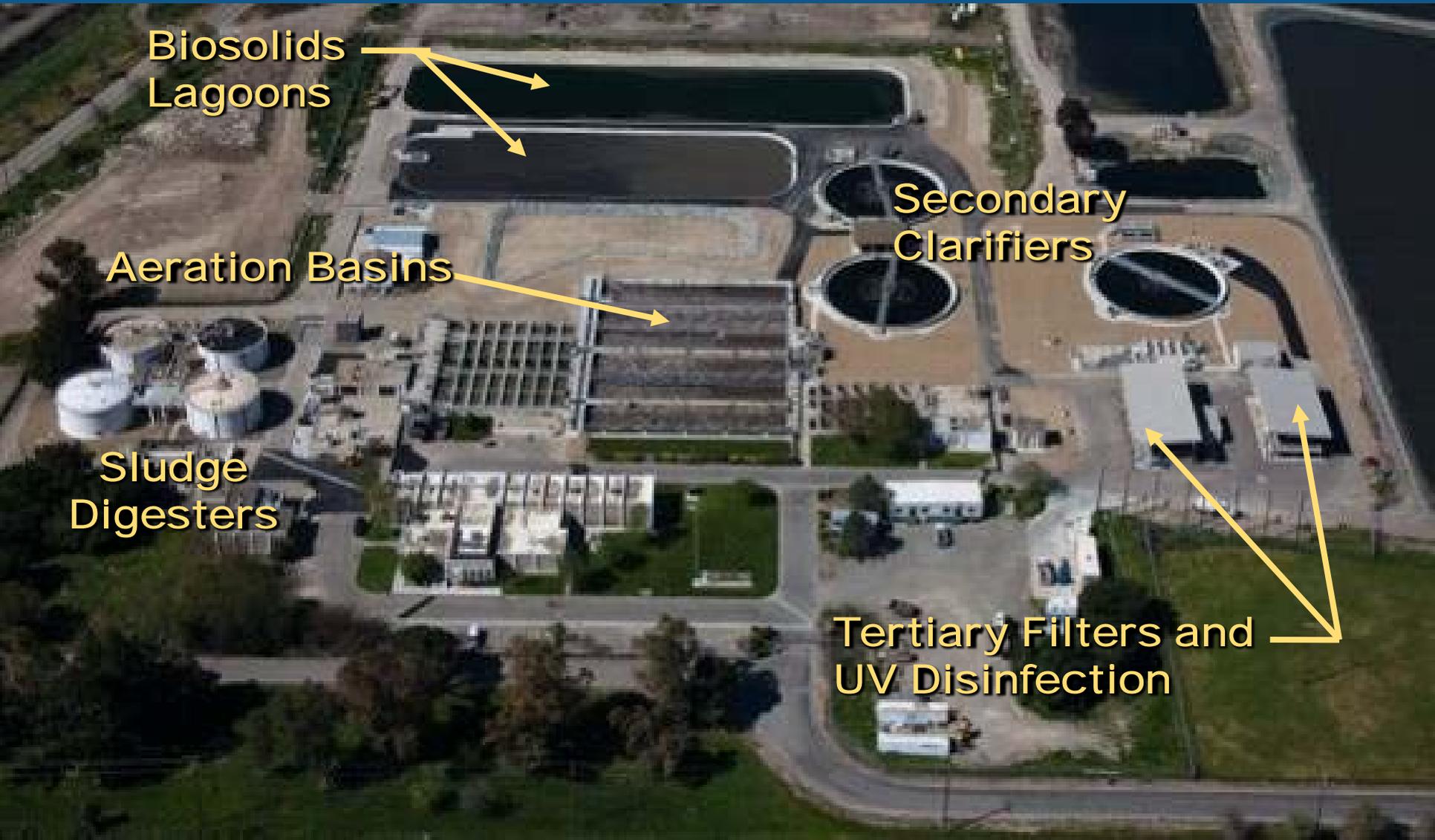
Secondary Clarifiers

Secondary Aeration Basins

Sludge Digesters

Biosolids Lagoons

# After Construction



Biosolids Lagoons

Aeration Basins

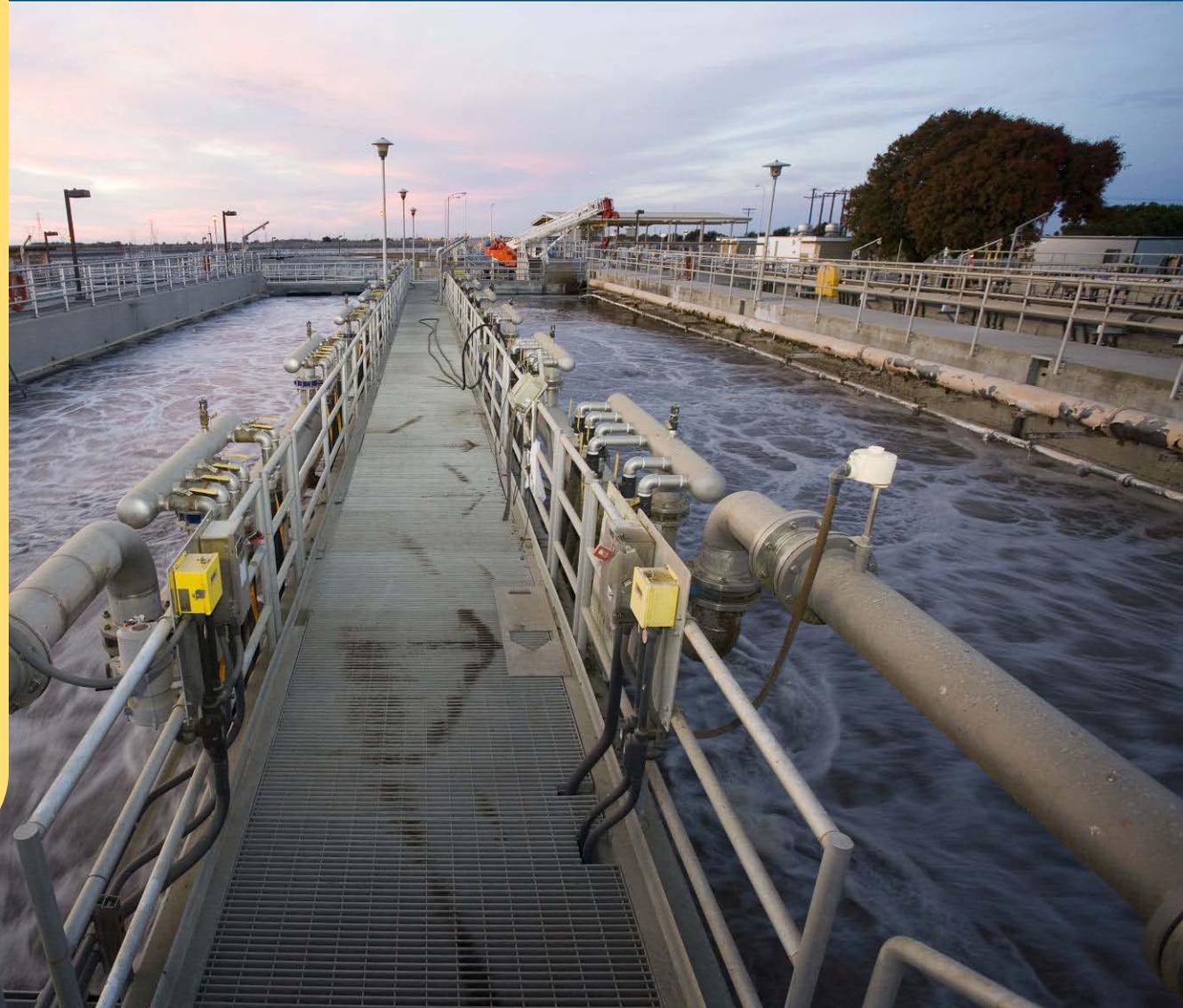
Sludge Digesters

Secondary Clarifiers

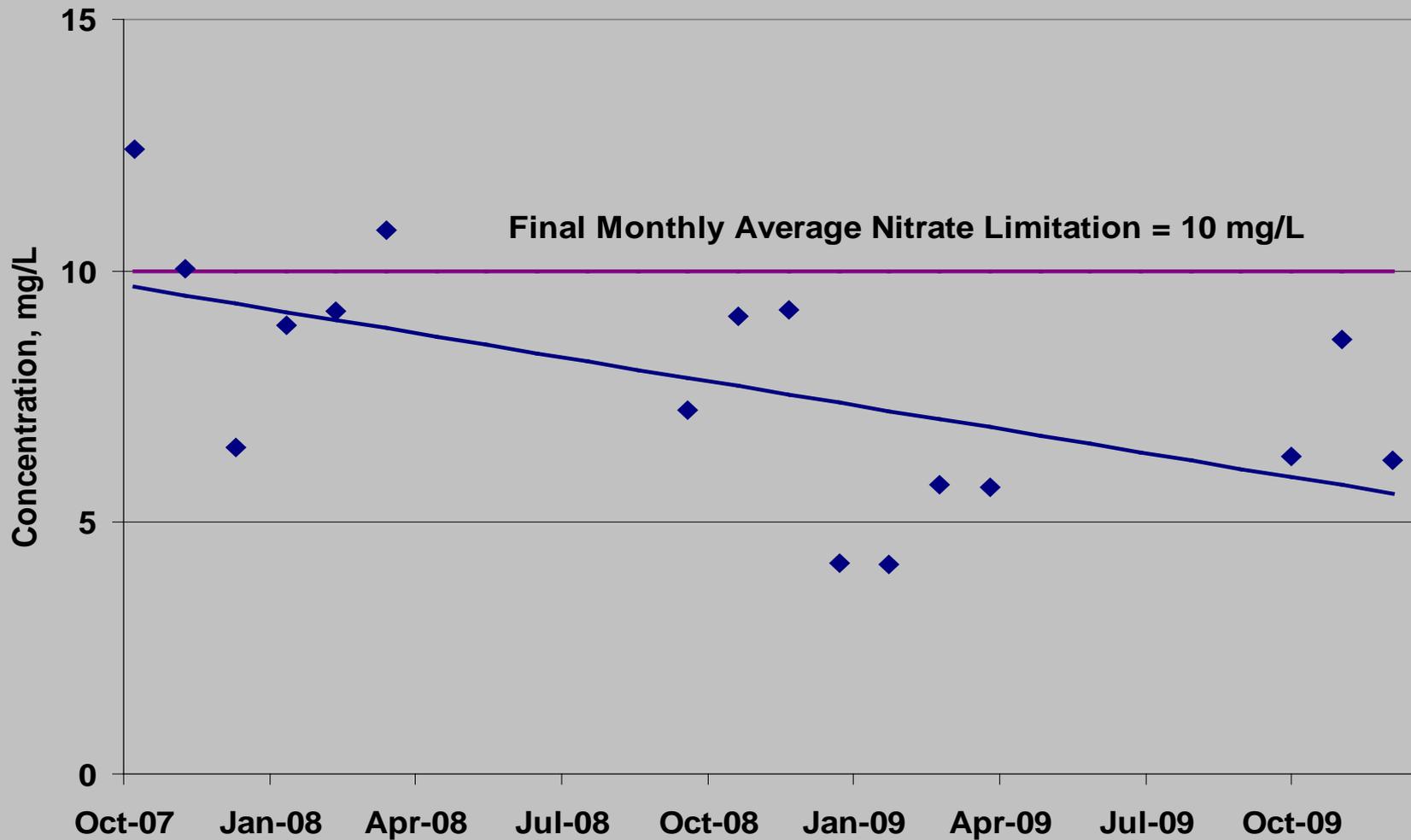
Tertiary Filters and UV Disinfection

# Secondary Aeration Basins

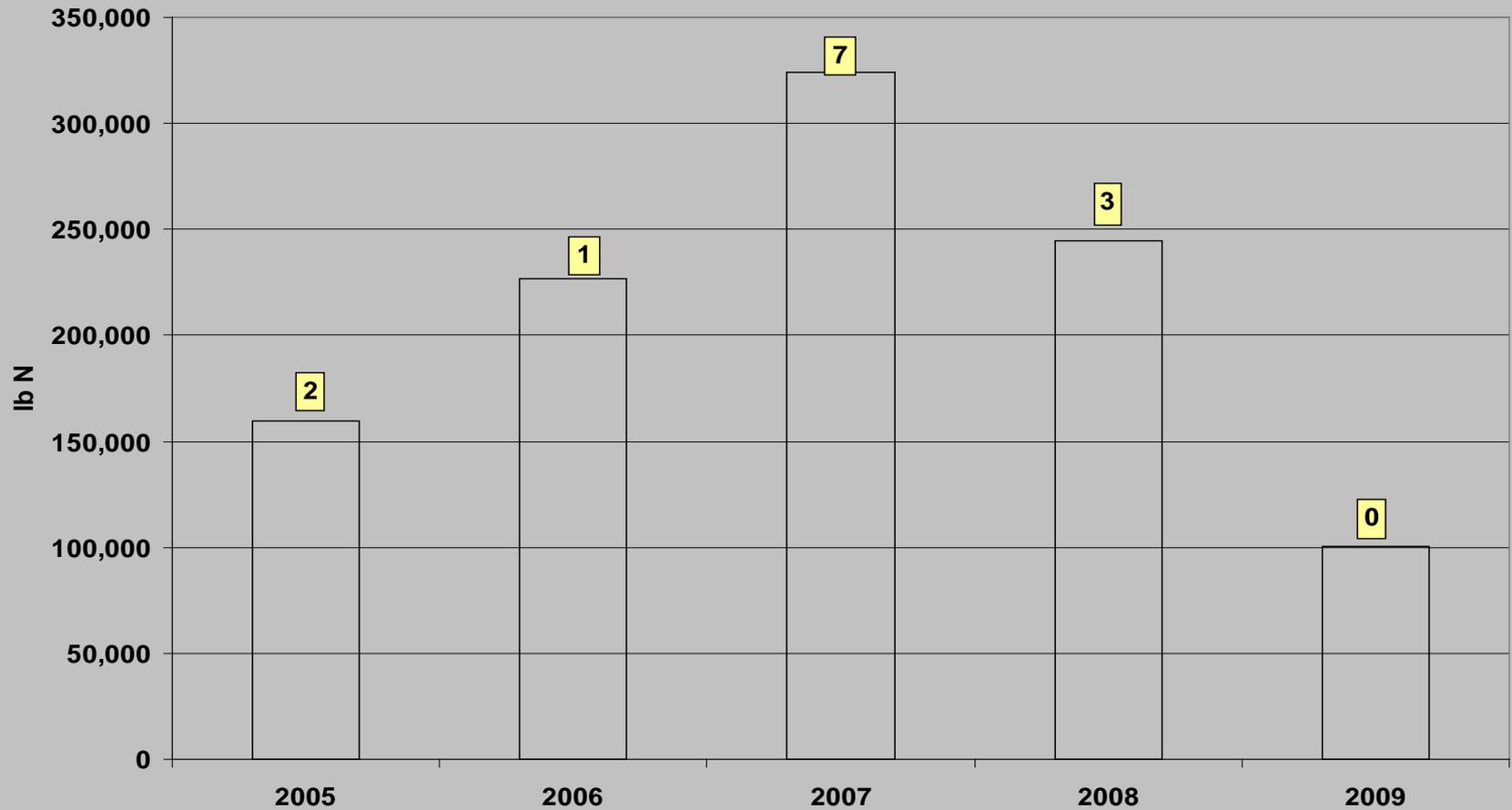
- Integral to meeting standards for nitrate and nitrite
- Reduces nitrogen levels in effluent
- Reduces loads to land application area & Delta



# Monthly Average Nitrate Data



# Historic Field Nitrogen Loadings

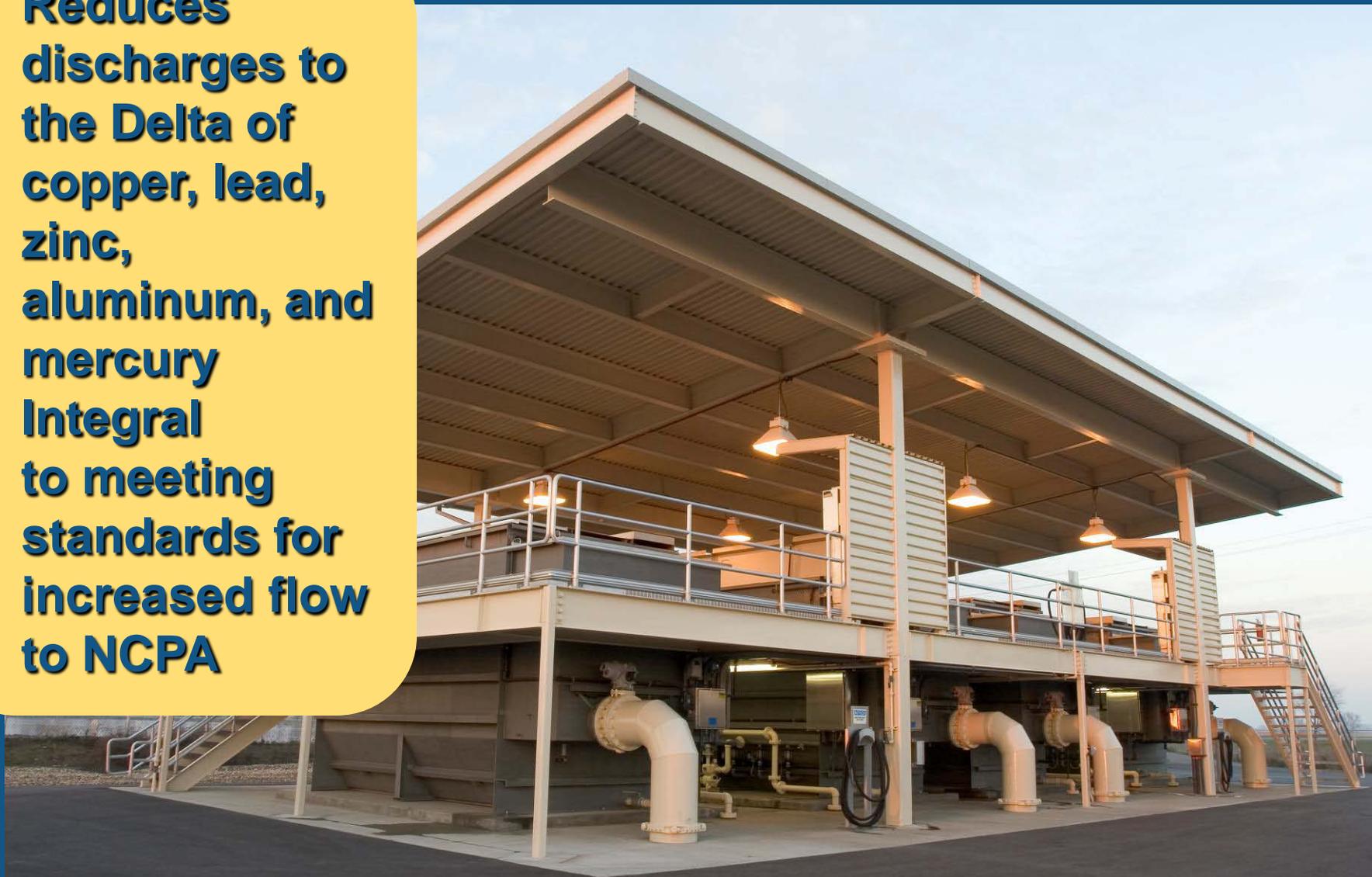


□ NITROGEN LOADING TO FIELD

ⓧ NUMBER OF FIELDS OVERLOADED WITH NITROGEN

# Tertiary Filters

- **Reduces discharges to the Delta of copper, lead, zinc, aluminum, and mercury**
- **Integral to meeting standards for increased flow to NCPA**





# Mercury Data

Year	Mercury Load		Methylmercury Load	
	pounds per year	drops per year	pounds per year	drops per year
Permitted	0.1	56.6	0.002	1.0
2008	0.03	16.5	0.0002	0.1
2009	0.02	12.4	0.0001	0.06

# UV Disinfection

- **Eliminates generation of toxic disinfection byproducts**
- **Integral to meeting standards for increased flow to NCPA**

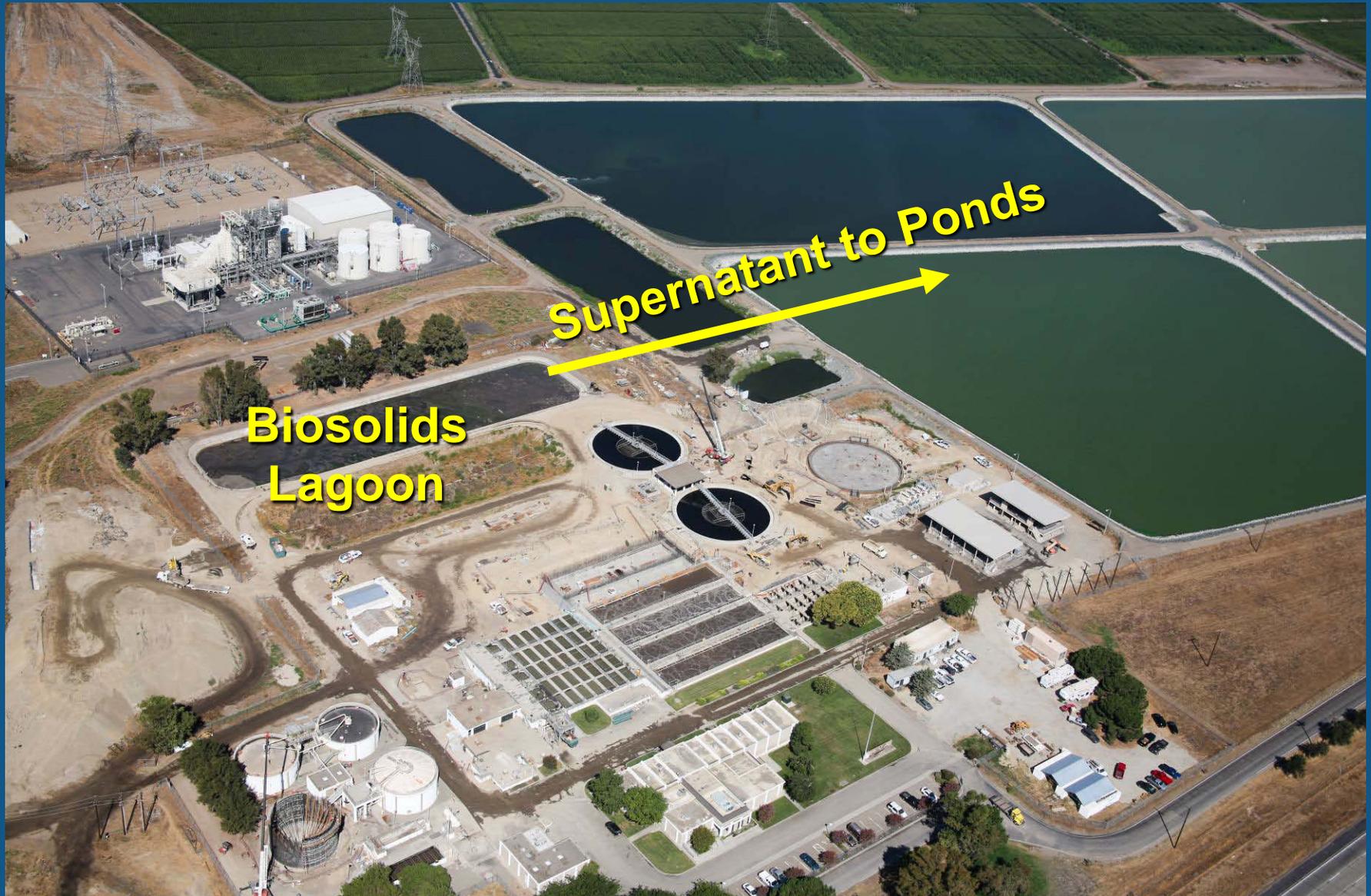


# Biosolids Lagoon Lining

- **Reduces discharge of biosolids supernatant to storage ponds**



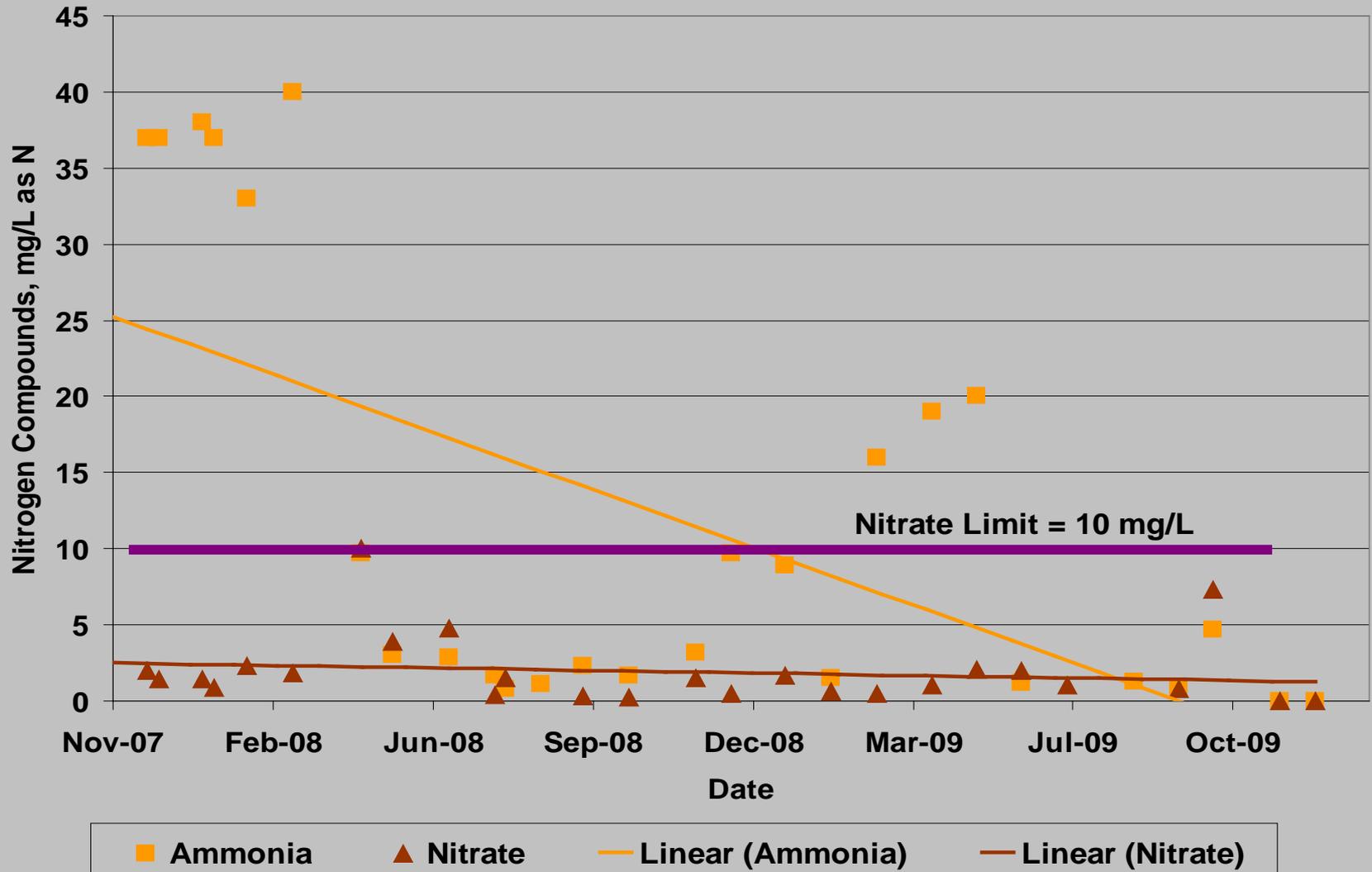
# Historic Biosolids Lagoon Operations



# Current Biosolids Lagoon Operations



# Storage Pond Nitrogen Trends



# Presentation Outline

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**What's Next?**





# 2012 Permit Application

- Data collection in 2011
- Expect less studies

## Issues to be resolved:

- Solids disposal practices
- Pond lining requirements
- Pond freeboard requirements
- Potential for additional regulations associated with land application activities
  - Application of hydraulic and nutrient loads

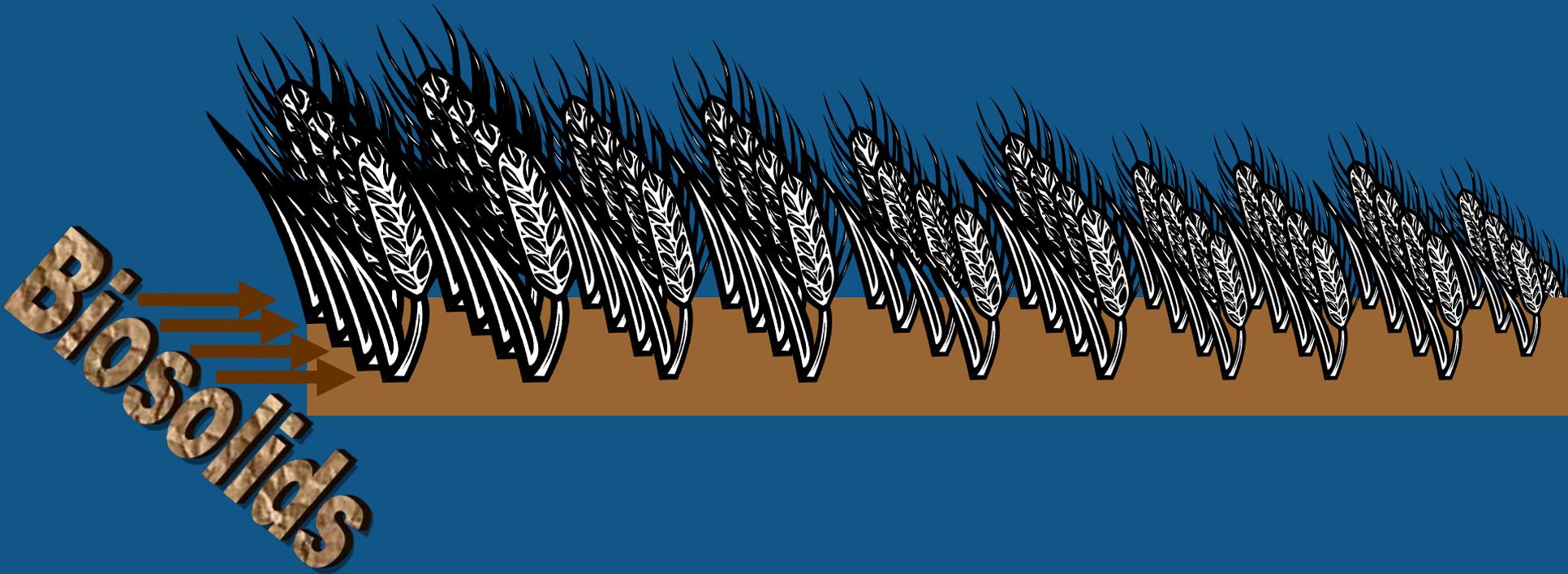
# Biosolids Dewatering

**Allows for:**

- **Much better control of biosolids applications to fields**
- **Economical off hauling of biosolids (as needed)**



# Application of Liquid Biosolids Causes Excessive Loading of Nitrogen At One End of the Agricultural Fields



# Why Consider Biosolids Dewatering?

Generate more than we can handle

Enhanced Operational Control

Regulatory Trends

You're Paying for it Now



# Questions?

