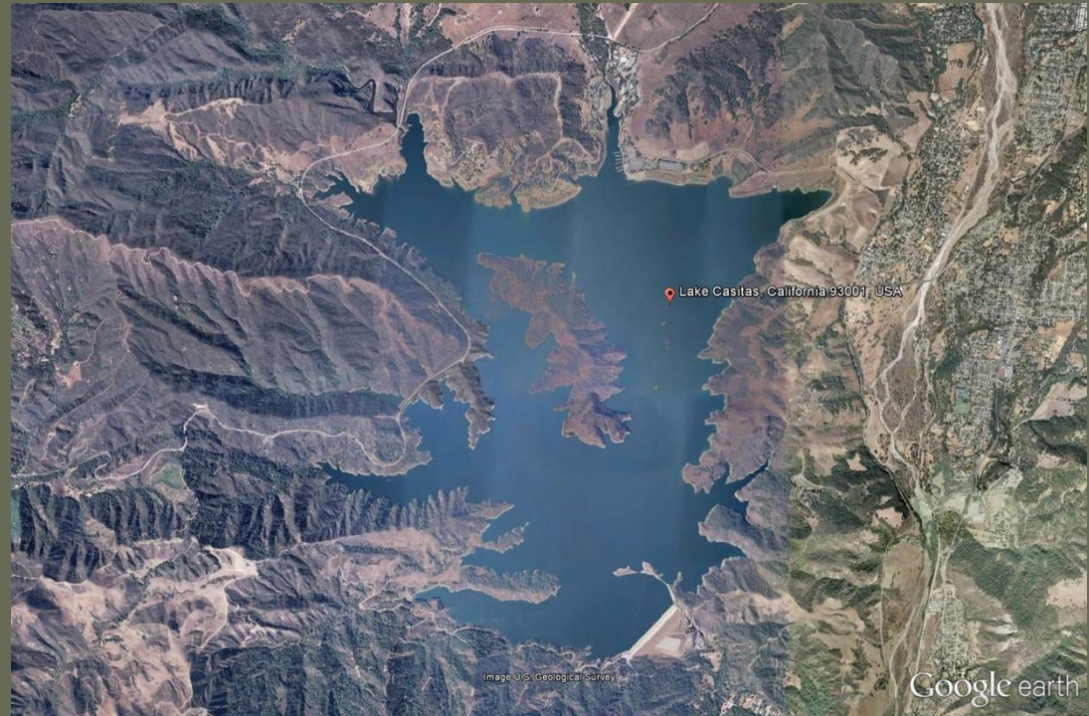


# Lake Casitas Aeration Project

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## Introduction

- Regular oxygen depletion (anoxia) in late summer and fall, anticipated to worsen in drought and with climate change
- Project to alleviate water quality challenges related to historically low lake levels
- Project supports improved water reliability to over 60,000 customers



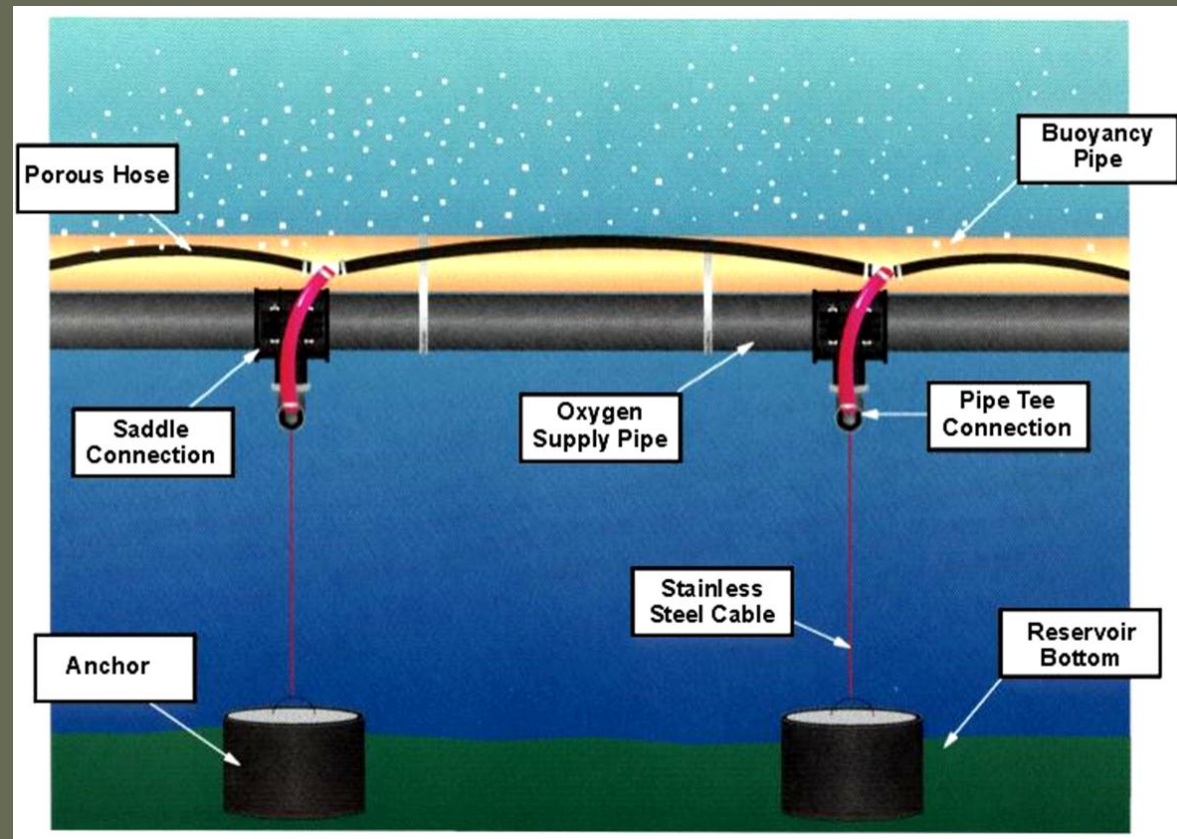
# Problems with (Anoxia) Depleted Oxygen Levels

- Lack of oxygen leads to the formation of undesirable compounds in lake
- Manganese and hydrogen sulfide can cause problems at water treatment plant
- Methyl mercury concentrates in fish tissue



# Increased Phosphorous

- Anoxia causes release of phosphorous from sediments at bottom of lake
- Phosphorous promotes algae growth and taste/odor problems
- Die-off and decay of algae leads to further oxygen depletion
- Aeration can interrupt this cycle to stop algae growth



# Drought Impacts

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Drought causes lower lake levels

Lower lake levels expose more nutrient-rich bottom sediments to sunlight

Lower lake volume concentrates nutrients

More frequent or severe algae blooms

Adverse effects to whole ecosystem



# Conclusion

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Drought and Climate change  
can affect lake adversely

Project goal is to maintain  
high-quality and reliable  
water supply

Casitas customers are  
located in multiple  
watersheds

Project will help prevent the  
need for imported water  
supplies

