

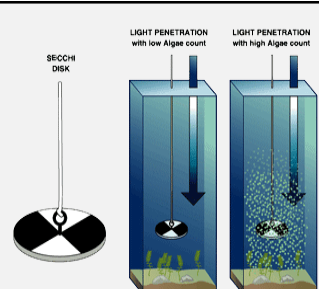
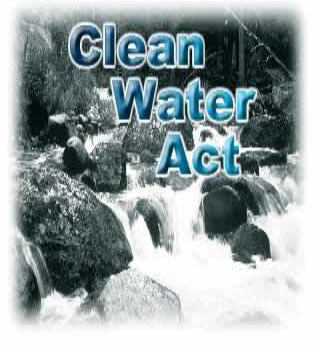
# SJBEP Water Quality Volunteers Monitoring Program

Restoration, Sustainability, and Health of the Caño Martín Peña Workshop  
USEPA Region 2-ORD

June 9, 2017

By

Dr. Jorge Bauzá-Ortega  
Science Director



# Cuenca del Estuario de la Bahía de San Juan

OCÉANO ATLÁNTICO



# WATER QUALITY MONITORING VOLUNTEER PROGRAM



# Since 2008, the SJBEP Water Quality Monitoring Program:

- Provided opportunity to more than 400 volunteers.
- An Approved Quality Assurance Project Plan.
- Provided data to the PREQB for the 305(b)/303(d) Water Quality Assessment Integrated Report and other agencies, academia, stakeholders, etc.
- Supported students in their investigations and projects.
- Being used by Federal and State agencies in their decision making process.



# The water quality measured parameters

are:

- ✓ Temperature
- ✓ Conductivity
- ✓ Turbidity
- ✓ Secchi depth
- ✓ Total organic carbon
- ✓ Dissolved oxygen
- ✓ Total nitrogen
- ✓ Nitrite & Nitrate
- ✓ Total phosphate
- ✓ Chlorophyll
- ✓ BOD
- ✓ Turbidity
- ✓ Fecal coliform
- ✓ Enterococcus









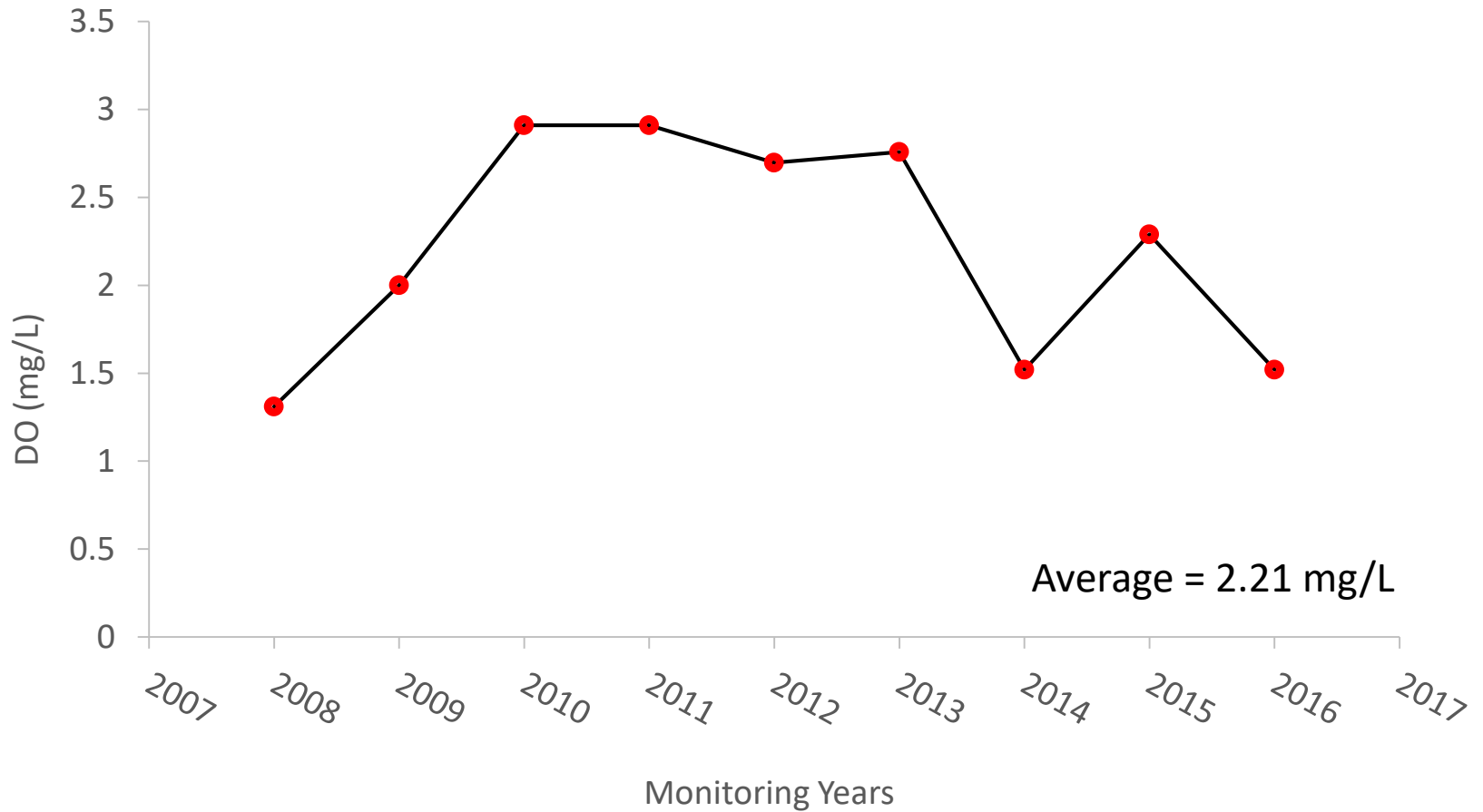




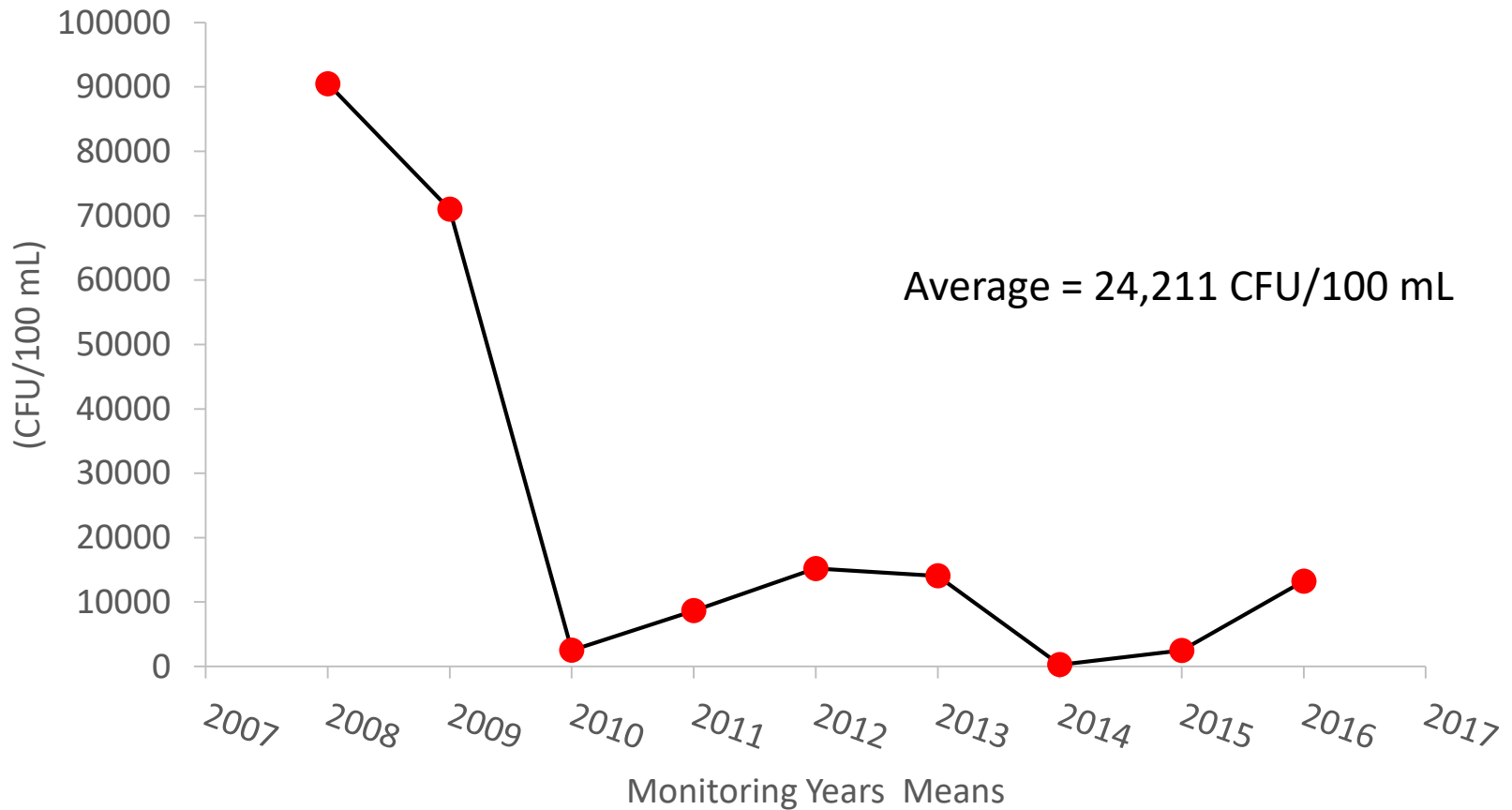




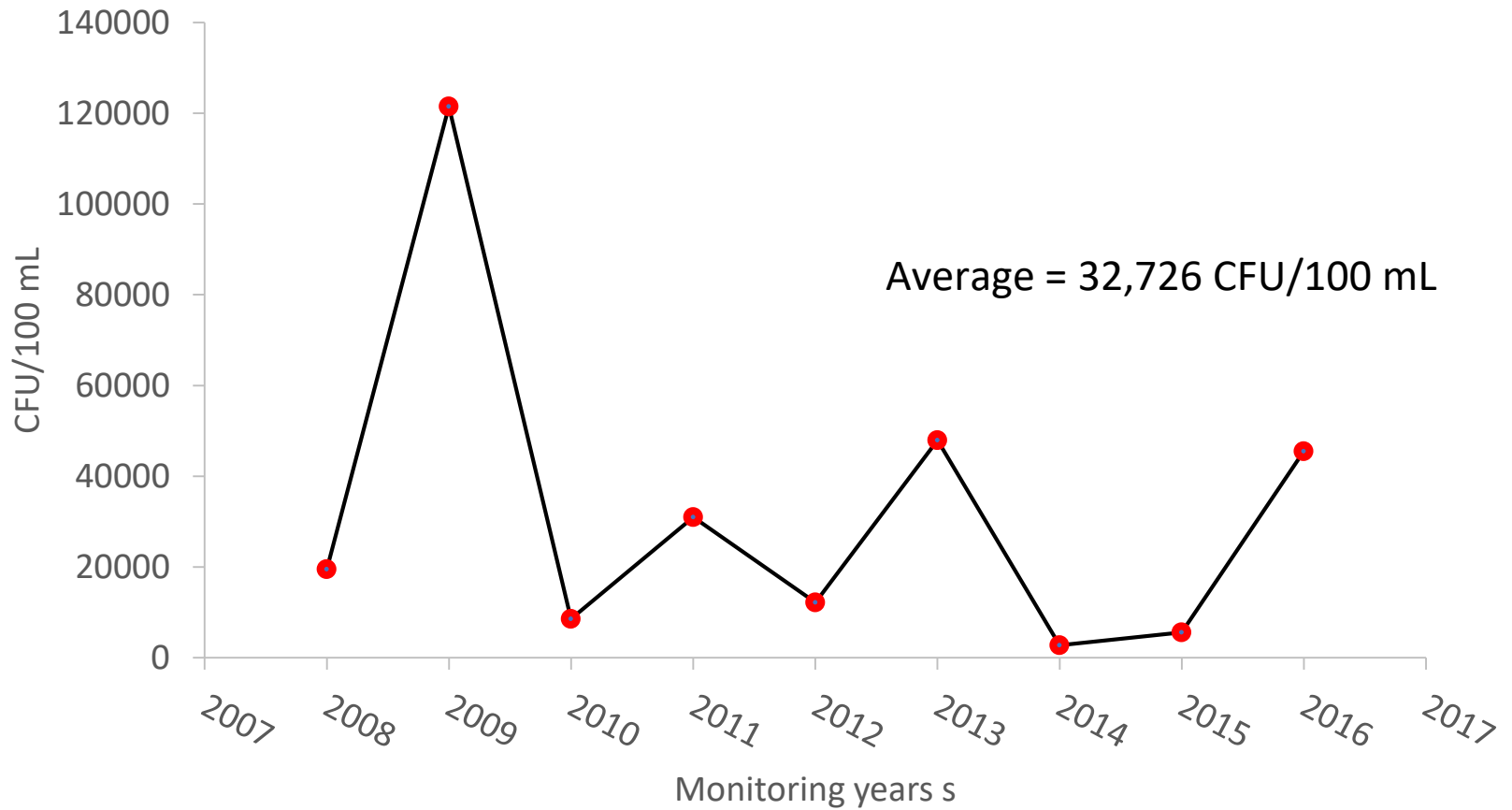
# Caño Martín Peña Dissolved Oxygen



# Caño Martín Peña Fecal Enterococcus



# Caño Martín Peña Fecal Coliform



# Water Quality Index/Score Card Guidelines

- Provides a convenient means of summarizing complex water quality data and facilitating its communication to a general audience.
- The water quality index is a number between 0 (worst water quality) and 100 (best water quality).
- The numbers are divided into five (5) descriptive categories to simplify presentation.

ÍNDICE DE CALIDAD DE AGUA	DESCRIPCIÓN	CALIFICACIÓN
95-100	<b>EXCELENTE:</b> la calidad del agua se encuentra protegida. La condición del cuerpo de agua se acerca a condiciones prístinas y naturales.	<b>A</b>
80-94	<b>BUENO:</b> la calidad del agua se encuentra protegida. El cuerpo de agua exhibe un grado de contaminación menor y con poca frecuencia.	<b>B</b>
65-79	<b>REGULAR:</b> la calidad del agua es usualmente protegida. El cuerpo de agua ocasionalmente exhibe niveles de contaminación.	<b>C</b>
45-64	<b>MARGINAL:</b> la calidad del agua está poco protegida. El cuerpo de agua se encuentra frecuentemente amenazado y contaminado.	<b>D</b>
0-44	<b>POBRE:</b> la calidad del agua no está protegida. El cuerpo de agua se encuentra constantemente amenazado y contaminado.	<b>F</b>

# Water Quality Index/Score Card Guidelines

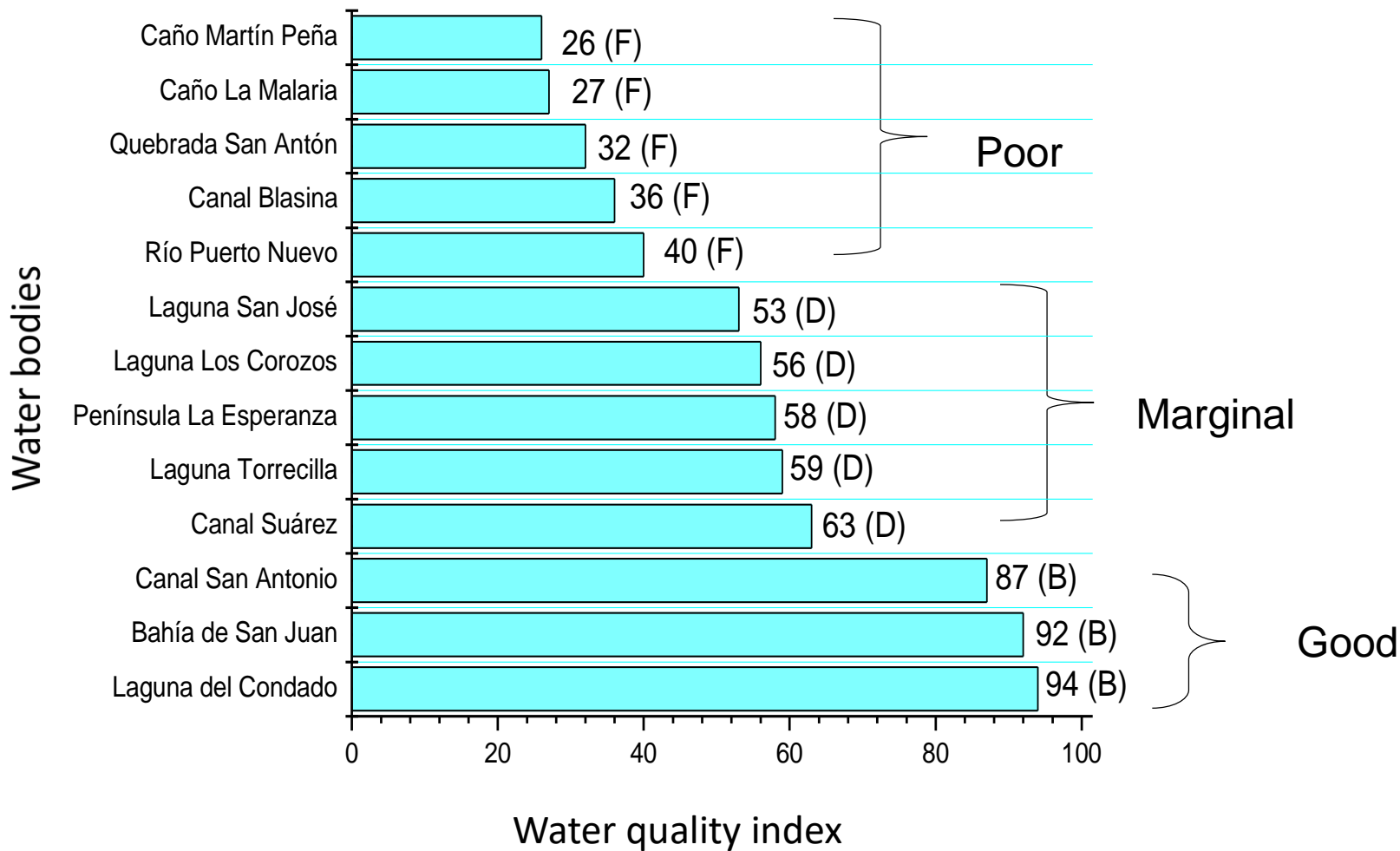
- Developed by the British Columbia Ministry of Environment, Lands and Parks\*.
- The Index incorporates 3 elements:
  - Scope: The number of variables not meeting water quality objective.
  - Frequency: The number of times these objectives are not met.
  - Amplitude: The amount by which the objectives are not met.

Parámetro de calidad de agua	Valor objetivo
Oxígeno disuelto	4 mg/
Turbidez	10 NTU
Transparencia del agua (profundidad Secchi)	1 metro
Aceites y grasas	1 mg/L
Nitrógeno total	1 mg/L
Nitratos y nitritos	0.5 mg/L
Fósforo total	0.5 mg/L
Carbón orgánico total	5 mg/L
Clorofila a	5 mg/L
Demanda biológica de oxígeno	5 mg/L
Coliformes fecales (media geométrica)	200 CFU*/100 ml
Enterococcus (media geométrica)	35 CFU*/100 ml

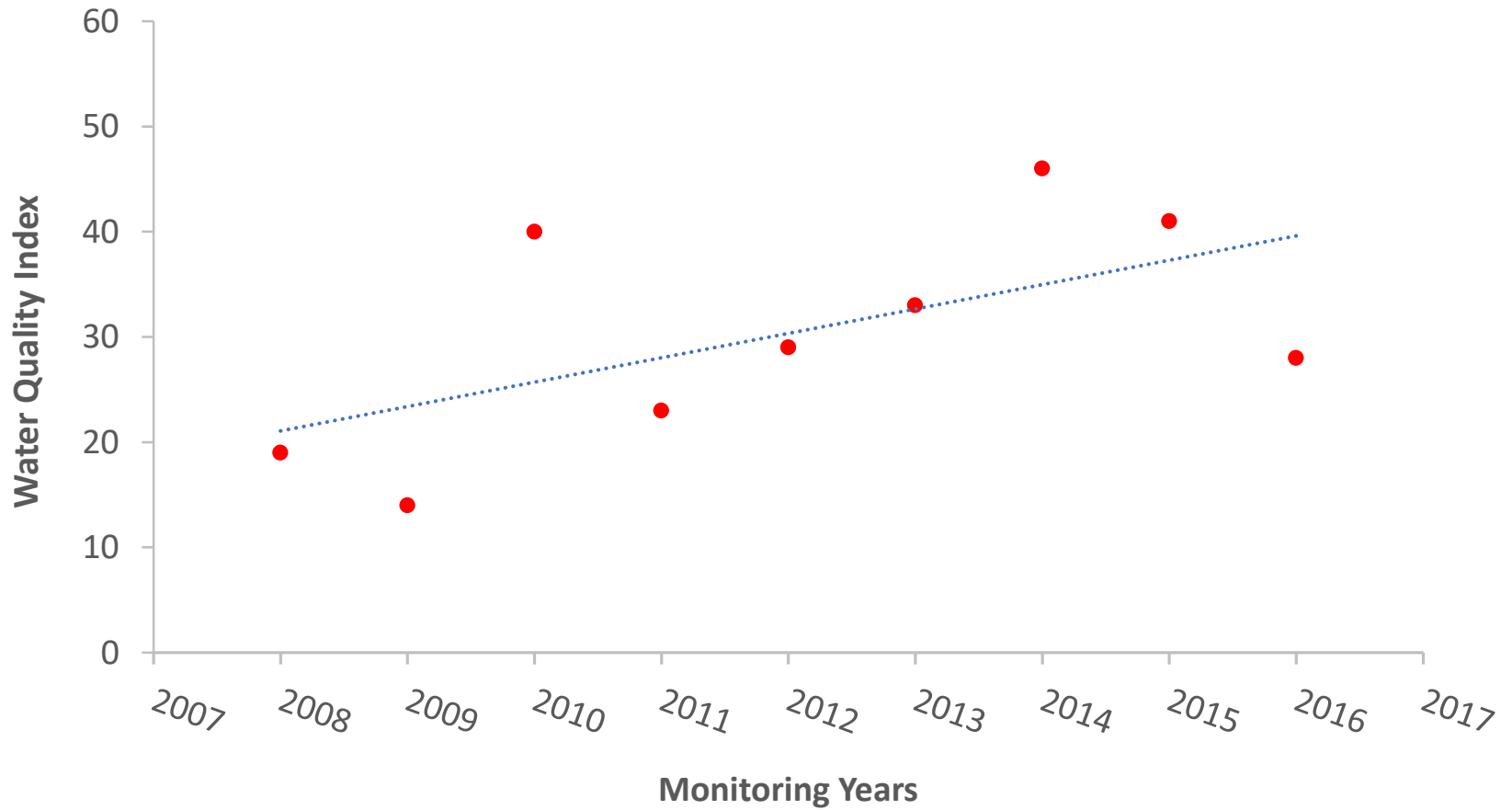
\*Canadian Water Quality Guidelines for the Protection of Aquatic Life, 2001.



# SJBE Water Quality Index & Scores



# Caño Martín Peña Water Quality Index Trend



# We need to Restore Water Circulation & Improve Sanitary Infrastructure = Caño Martín Peña Restoration



# Next State of the Bay report coming in 2017.



**MUCHAS GRACIAS !**

[www.estuario.org](http://www.estuario.org)

<https://www.facebook.com/ciudadde lasaguas>

[jbauza@estuario.org](mailto:jbauza@estuario.org)

