



2016 Orange County Infrastructure Report Card

Presented to
Orange County Waste Management Commission
David Tieu, PE, MSCE, QISP, QSD/P
September 8, 2016

2

Overview and Purpose

- Joint Venture Between American Society of Civil Engineers (ASCE) and University of California – Irvine (UCI) to evaluate Orange County's Infrastructure.
- Promote the importance of infrastructure maintenance and improvements.
- Educate the public and policy makers on funding needs, policy decisions, and long term planning for future generations.





3

The Importance of Infrastructure

- Quality of Life
- Growing Population
 - Orange County Population: 3.1 million
 - 20 year projection: 300,000 add'l residents
- Economic Growth
 - 20 year projection: 250,000 new jobs
 - Tourism
- Public Safety
 - Natural Disasters
- Protection of the Environment
- Aging Infrastructure



4

Infrastructure Evaluated

- Aviation
- Electric Power
- Flood Control and Levees
- Ground Transportation
- Natural Gas
- Oil
- Parks, Recreation, and Environment
- Schools
- Solid Waste
- Surface Water
- Wastewater
- Water Supply





5

Methodology

- Condition, Capacity, Operation & Maintenance, Security & Safety.
- Grades Assigned A thru F.
- Working Committee
 - Solid Waste Working Committee: OCWR staff and Industry Experts
- Expert Advisory Group (EAG)
 - Solid Waste EAG: Industry Experts and Regulators
- Executive Committee
- ASCE National Committee
- Goal: Achieve Minimum Grade of B.

6

Solid Waste Infrastructure

- Categories
 - Collection
 - Processing
 - Disposal
 - Greenwaste Processing (New)
- Sources of Data
 - State Databases
 - Regulatory Records and Inspections
 - Survey Questionnaire
- OCWR Records





7

O.C.'s infrastructure report card

A coalition of 113 academic, public and private civil engineers spent more than a year evaluating Orange County's infrastructure systems. In a report, released Thursday, 12 infrastructure systems, including aviation and water quality, received grades. This is the fourth infrastructure evaluation since 2002.

	'02	'05	'10	'16
Aviation	C+	B	B	A
Electric power	-	-	C+	C-
Flood control and levees	D	C	C-	C-
Ground transportation	C	C+	B-	C
Natural gas	-	-	-	B-
Oil	-	-	-	B-
Parks, recreation and environment	C	C	C+	C+
School facilities	D	C+	C+	C
Solid waste	B	B+	B+	B
Surface water quality	-	-	D	D+
Wastewater	C+	C+	B	B
Water supply	B	B	B-	B
OC's infrastructure GPA	C	C+	C-	C+

Sources: UC Irvine and ASCE

STAFF GRAPHIC

Solid Waste Grade

B

8

What Does a "B" Grade Mean?

- Robust Integrated System
- Orange County is Well Served
 - Regular Trash Pick
 - Modern Facilities (Fleets, Equipment, Safety)
 - Resiliency
- Growth Potential
- Protection of the Environment
- Dependable Source of Revenue
- Orange County Cities are Meeting Diversion Requirements of AB 939.
- Strong Outreach with Community



9

Ongoing Challenges

- Residential Encroachment and Development
 - Complaints (Noise, Odors, Dust)
 - Regulatory Enforcement and lawsuits
- Siting of New Facilities/Expansion of Existing Facilities
- Utilization of Conversion Technologies
- Opportunities to Incorporate Green Practices (i.e., LEED Certification)
 - AB 32 GHG Emissions Determination

10

New Challenges (Since 2010)

- New Legislation
- AB 341 (2011): Statewide 75% Recycling Goal by 2020. Mandatory Commercial Recycling by July 1, 2012.
- AB 1594 (2014): Eliminates PGM as ADC Diversion Credits by Jan. 1, 2020.
- AB 1826 (2014): Mandatory Commercial Organics Recycling by April 1, 2016.
- General Industrial Stormwater Permit (2015)
- General Waste Discharge Requirements for Composting Facilities (2015)
- Consistent with the Model of a "Zero Waste" Society.



11

How Do We Compare to Other Counties?

Region	Year	Grade
Los Angeles County	2012	B+
San Diego County	2012	B
Orange County	2016	B
Inland Empire	2010	C+
State of California	2012	B
National	2013	B-

12



Thank You