West to East The amazing story of how CH2M HILL grew to become a national consulting firm





It all started in northern Virginia



Isaac Newton Square Reston



How CH2M HILL grew into a national firm

- Tahoe/Tahoe East saga Bob Chapman & Dana Rippon
- From Reston through the Northeast & Canada Dick Bedard & Sheldon Barker
- Private sector and EPA Superfund Dave Ellison
- BC&E and into the Southeast Cliff Thompson
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Five extraordinary individuals lead the Tahoe Saga Harlan Moyer



Without these giants, there would have been no Tahoe East!



Archie Rice



Gene Suhr

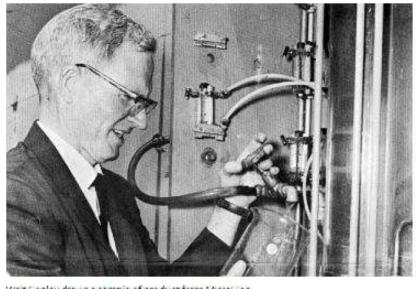


Russell Culp

Ralph Roderick



A \$15,000 South Tahoe PUD pilot plant was a catalyst for firm growth in the east



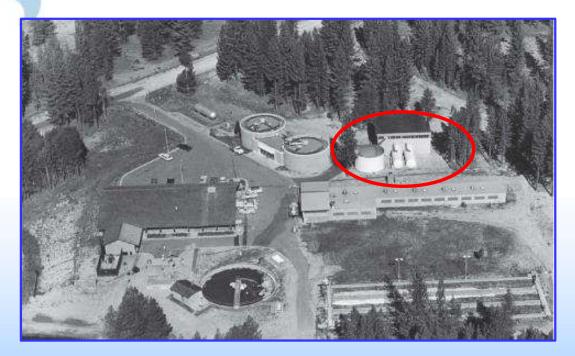
Walt Conley draws a sample of product from MicroFioc

The "at risk" investment led to:

- World wide advancement of
 wastewater reclamation
- The successful merger of CH2M & Clair Hill & Assoc.
- Launching our Virginia office
- Organic growth throughout NE
- Platform for parallel growth in SE



EPA grant funding created benchmark fullscale tertiary treatment with demonstrated performance excellence



Industry firsts included:

- MicroFloc Tri-media wastewater filtration
- Activated carbon with on-site regeneration



EPA grant funding created benchmark fullscale tertiary treatment with demonstrated performance excellence



Industry firsts included:

MicroFloc Tri-media wastewater filtration

then with

tion

Product Water looked and tasted like drinking water...The foundation for Tahoe East

7



1968 - entire plant tripled to 7.5 mgd with innovative and robust integrated plant processes



- Improved methods for phosphorus removal
- Nitrogen removal
- Integrated solids handling and chemical recycling
- Multi-year demonstration testing via EPA grant



By late 1960's the STPUD facility received worldwide recognition



Click here to view video on the CH2M Alumni Association website!



By late 1960's the STPUD facility received worldwide recognition



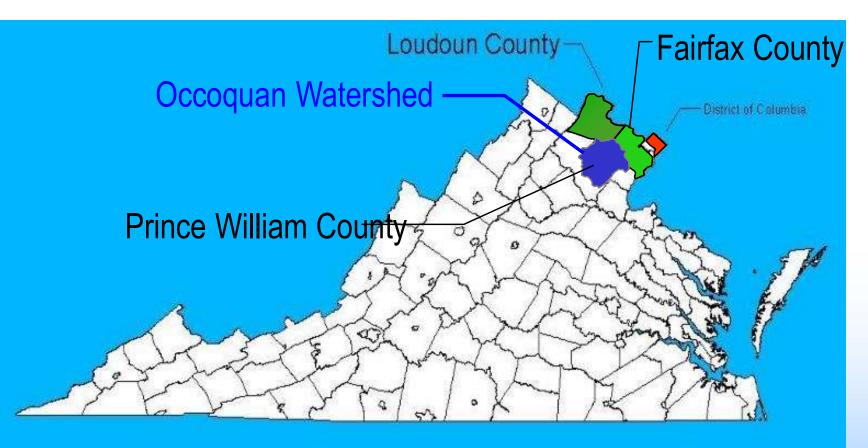
Visitors from:

- 13 countries
- Over 30 states

The most important visitor was Noman Cole, Chair of the Virginia State Water Quality Control Board, who coined <u>Tahoe East for the Occoquan</u>



UOSA was formed to address critical Northern Virginia water resource challenges





The tremendous teamwork and business opportunities gained from South Tahoe catalyzed the merger of two great firms





Jim Howland & Clair Hill 1971



CH2M Hill was selected over 25 competitors to complete Preliminary Engineering





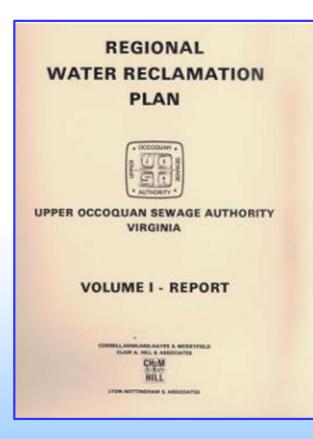


Felix & Oscar "The Odd Couple"





Completing the engineering report required a tight schedule and overcoming many challenges





Siting had to avoid historical sites

...And the firm was finally paid!!



UOSA design team reunion...



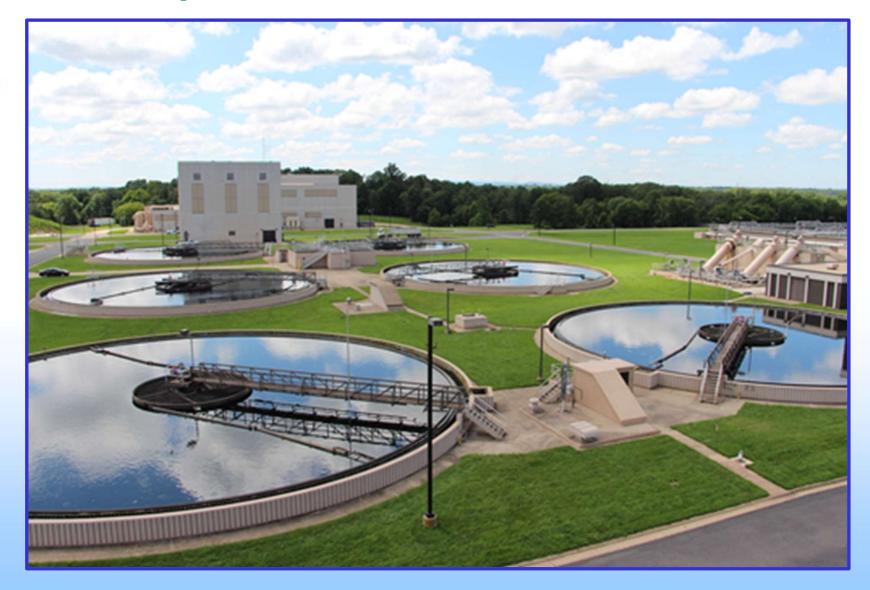
15 years later at Clair Hill's 80th Birthday Party



15



Startup pressures: no time to drain clarifiers for inspection...used Plan B





UOSA Grand Opening: 1978



Millard Robins opens the gate to discharge first treated water



UOSA Grand Opening: 1978



Millard Robins opens the gate to discharge first treated water



For over 50 years, UOSA has been expanded to keep up with rapidly growing suburbs



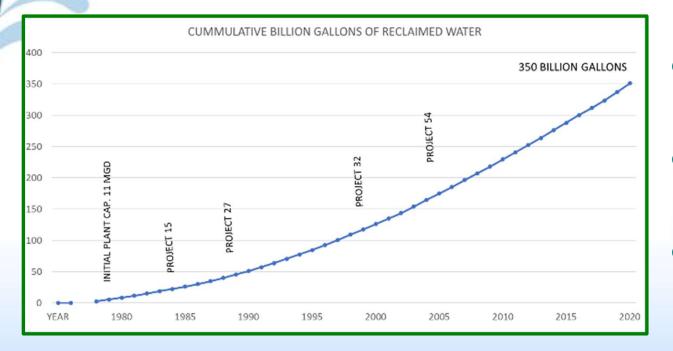


For over 50 years, UOSA has been expanded to keep up with rapidly growing suburbs





UOSA has become the "Gold Standard" for Indirect Potable Reuse



- 350 billion gallons of reclaimed water
- Safe Yield of Reservoirs
- Occoquan Watershed Monitoring Laboratory



UOSA & CH2MHILL: An amazing 50 year partnership

Original PER	1972
George Gunn arrives	1973
Project 15	1973 – 78
Interceptors & PSs	1973 – 77
Project 27	1983 - 88
Project 54	1987 – 04
PS Expansions	2004 – 12
2050 Master Plan (60 mgd)	2020



....and while UOSA was initially under construction, Reston and Corvallis completed the "Best" AWT design in our history



MONTGOMERY COUNTY REGIONAL AWT PLANT DICKERSON SITE An Element of the Regional Water Resource Management Effort



ELECTY We Device 1800x3 SR GODIER & NEROLY H CONFER & NEROLY H CONFER & NEROLY H CONFER & NEROLY





CORNELL HOWLAND HAVES & MERRYFICLO CLAIR A. HULL & ASSOCIATES

LANNING & DESIGN STUDIO LTD.

PROJECT DEVELOPMENT REPORT VOUVEL INSTRUMENT DESCRIPTION

VOLUME I PROJECT DEVELOPMENT PLANS VOLUME TO COTURE SET LA COTURE VOLUME TO SATIS, REACE INVESTIGATIONS

Montgomery County Regional AWT

P留世纪ARI ALA



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"Because we're not there!"



Bob Card - circa 1986



Having grown up in New England, I called my friend Bob Card and asked what death wish we had to compete in Boston

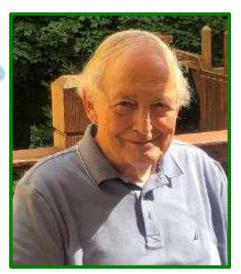
- He said "we aren't there."
- This points to several principles in CH2M Hill:
 - We have a "Manifest Destiny"
 - We are a 'hub and spoke" operation
 - We are characterized by superior people, technology, projects and clients
 - We went to the work and our families did too
 - NER is an example of that



The operation that started in Reston quickly grew through the Northeast







Cliff Bowers



John and Karen Rendall

Boston

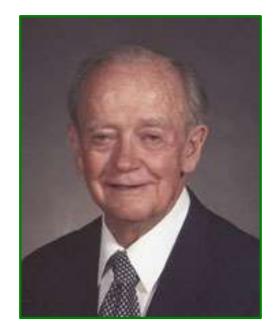
Value Engineering



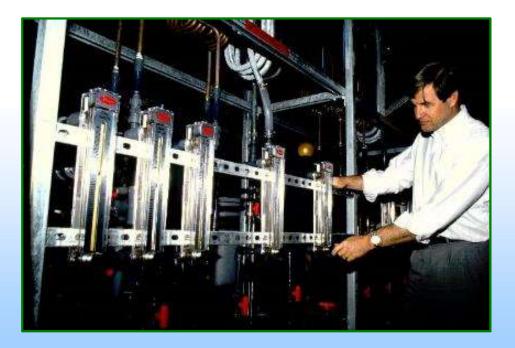
Deer Island WWTP



Ken Miller and Bruce Johnson led cutting edge work on Boston's SDWA compliance



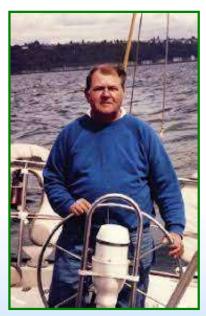
Ken Miller



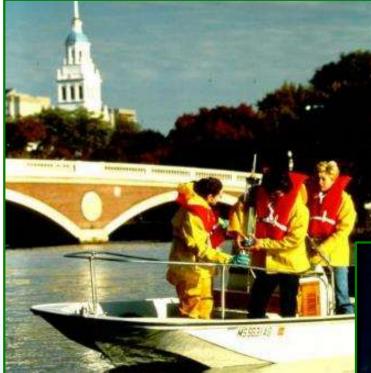


Bruce & Marsha Johnson





Gene Suhr



MWRA CSO







Jim Hawley



Paul DeKeyser

Bangor, Maine WWTP Upgrade

(said in New Englandese as Banguhhhh)







Steve Guttenplan

New Jersey Office

- Pompton Lakes Superfund
- Major Industrial clients



Terri Gerrish





Our work in Philadelphia actually started with Drinking Water work out of the Old BC&E Gainesville Office

- The PHL office started later with industrial, hazardous waste and water work
- Later, we acquired Rogers Golden and Halpern
- They added a broad spectrum of clients and services





Jim Schwing

Led by Jack Rattray/CDM & Hawley/DeKeyser Team

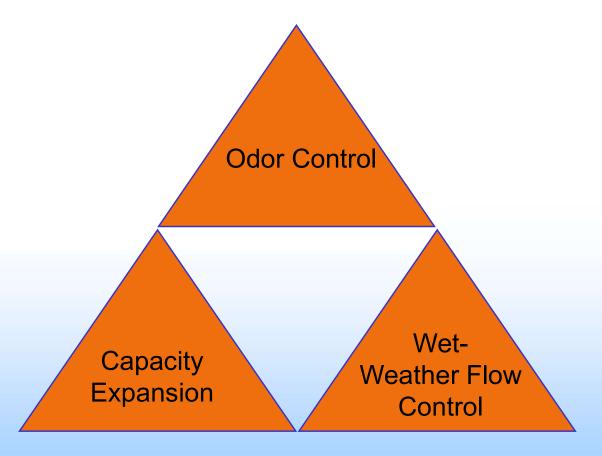
- Started with IDC
- Jim Schwing moved to become Area Manager
- Teamed with CDM, we won ALCOSAN Program (Virtual JV)





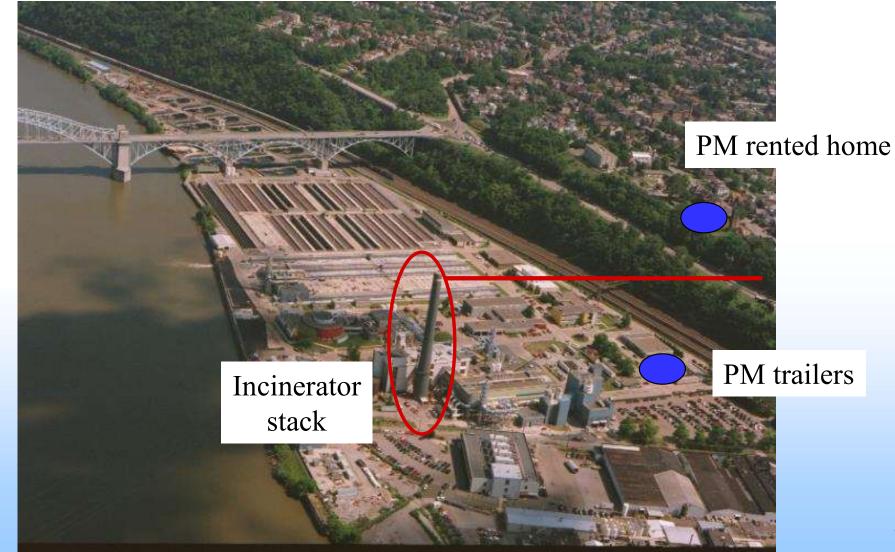


The ALCOSAN program included three elements, but odor was the Big Deal



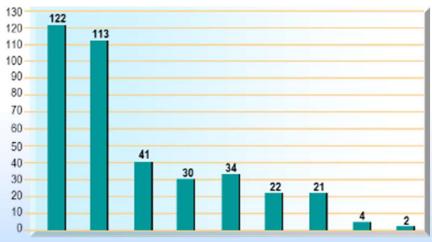


Coincidentally, the incinerator stack was the same height as the bluff with a neighborhood to the north





Program success added value to both the neighborhood and the operators



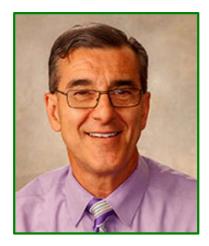


Closed Door = **Success!**

Odor Complaints Received by Year (1993-2001*) (*2001 through 9/24)



Outstanding people, projects and clients are our trademark:



Vin Rubino



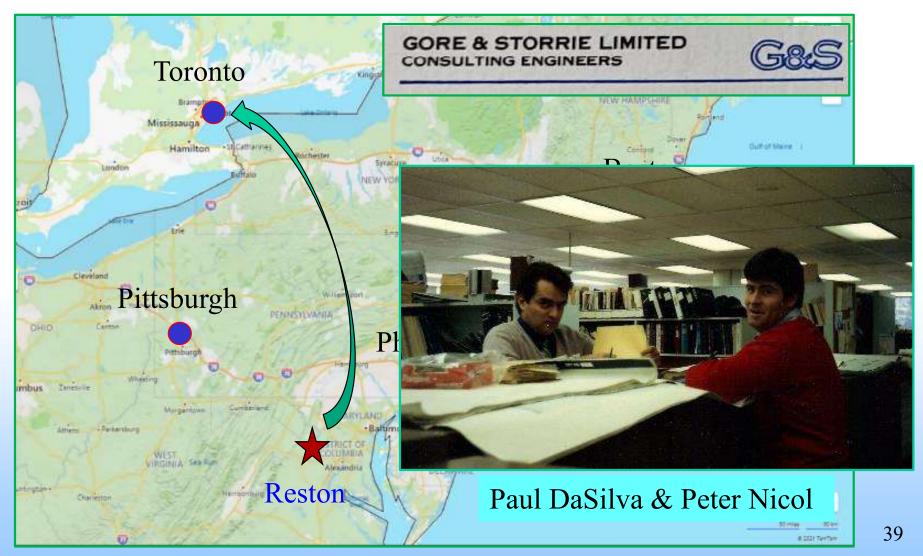
Maria Sheridan

New York City





We partnered with a Canadian firm known for its integrity and professionalism





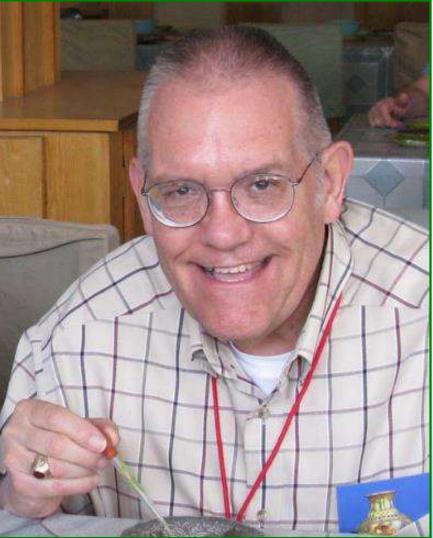
Gore & Storrie, the largest environmental engineering firm in Canada, became a key part of our North American operation





You haven't lived until you've been Wollmanized

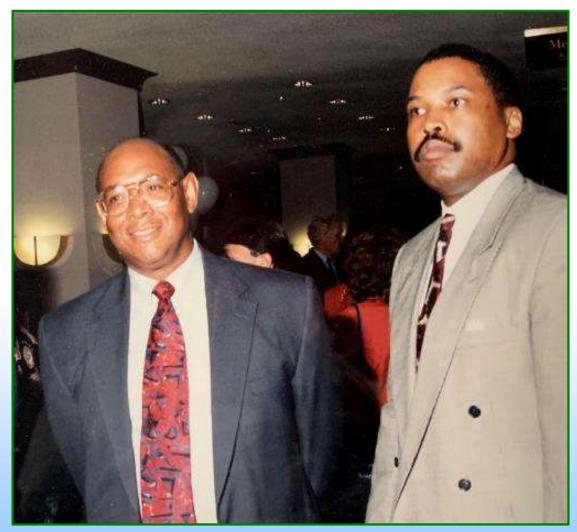
Only problem is no red pen and his maniacal grin is muted



Al Wollman



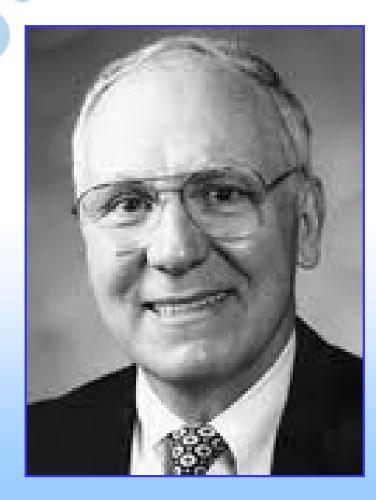
You can't work in the Northeast unless you understand politics



Willie Loud & Howlie Davis



In the words of the great CH2M Hill Philosopher Bud Ahearn



I'm out of:

- Altitude
- Air Speed
- And Now TIME



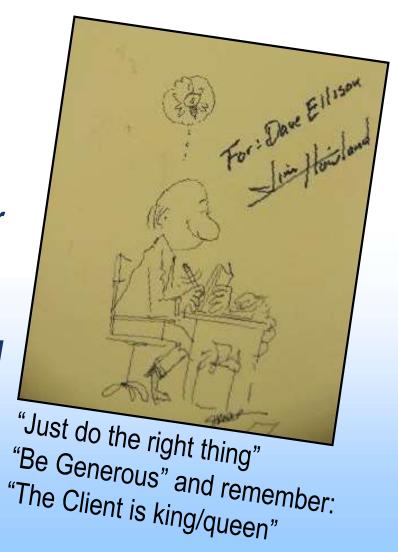
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Private Sector and EPA Superfund Development in Reston (mid 70s – mid 80s) Dave Ellison

- First, we followed Jim Howland's *"little yellow book "*
- We used the CH2M Hill network for private sector work
- We connected with EPA Superfund through college relationships (Brent Bixler & Bob Dagostaro)





McCain Foods Now the largest frozen potato processor in the world.





Potato Chippers Became Our Clients



Ralph Peterson, PM + Corvallis Design Group





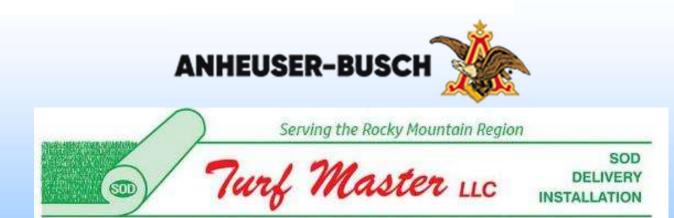
Golden Chips For The New York Market! Dave Ellison, PM



Anheuser-Busch Sod-farm Land Treatment for Yeast Wastewater

- Fort Collins, CO .
- Jacksonville, FL.
- Houston, TX.

Don Fox, PM & the RDD Agriculture Group

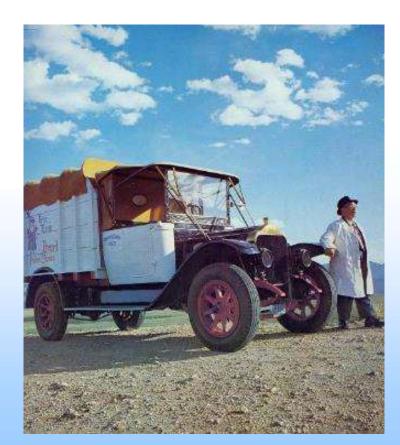




Leprino Foods - Jim Leprino - Denver Now the largest mozzarella cheese processor in the world.

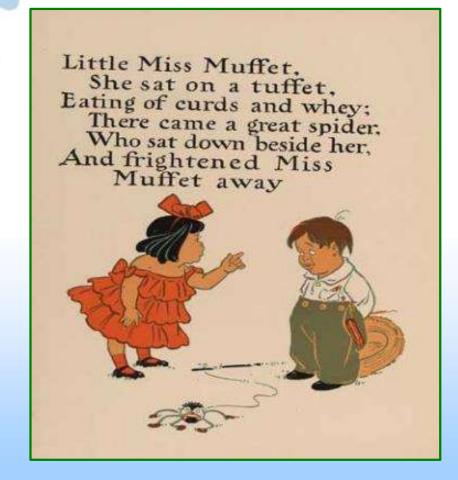


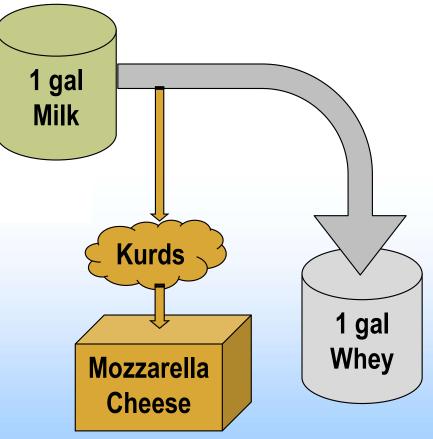
Mike Leprino (circa 1950) – Jim's father – developed over 200 verities of mozzarella cheese for the marketplace.





Kurds & Whey







Our Superfund Work Began As A Subcontractor To CDM

This "Interim Superfund Contract" was a small, "starter" work effort for CH2M Hill.

99th Street Elementary School

Cliff Thompson PM for the Love Canal Project

Love Canal





Superfund Was Indeed A "Game Changer" For Reston And The Entire Firm

- The Reston office became the EPA "Zone Project Management Office" – doubling the size of the Reston office very quickly in 1983.
- In 1986, the EPA rolled out a second and much larger contract, called REM IV that accounted for more than ¼ of CH2M Hill annual revenues and involved over 1,000 professionals – nearly 30 percent of the firms' workforce.
- CH2M Hill received EPA's highest award the Administrator's Award – six times during the first seven years that award program was in place.



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The origin of the Montgomery office, acquisition of BC&E and integration

- Thompson and Tuggle(T&T), 1972
- **BC&E** purchases T&T, 1975
- **Tuggle leaves for Russell Corp, 1977 (Alexander City)**
- Delivery of new water and wastewater facilities
- Project success leads to long term consulting contracts with larger Alabama cities
- Montgomery lab and engineering grows to more than 300 staff
- Many key contributors, including Blake Jeffcoat, Steve Gelman, Ray Topping, Craig Vinson, Steve Newton, and Greg Mooney





Acquisition of BC&E in 1977



- 250 person regional water firm, strong in Florida with smaller presence in Atlanta and Montgomery
- Offices operated with autonomy, Gainesville was the design center, operated somewhat like CVO
- BC&E owned by Hercules Corp who suddenly decided to exit consulting business
- Instantly the firm has a large presence in the Southeast

HERCULES

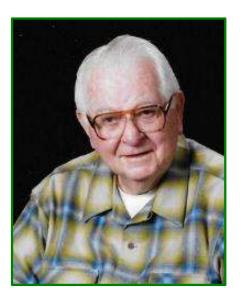






Integration of BC&E

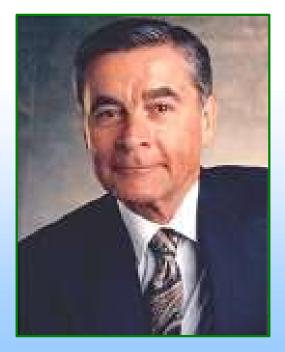
- Joe Worth moves to Gainesville
- Brought required confrontational style
- BC&E brought into corporate culture
- Non stop conference calls, chicken Thursday, required coffee breaks, required collaboration
- First KE Meeting in CVO





Jim Poirot moves to Atlanta

- Stress importance of buildout throughout the entire District
- Importance of collaboration within the profession
- Organization was ready for softer management style
- Longer range planning and strategy received greater focus





Lyle Hassebroek continued to optimize the integration



Implemented:

- Organizational effectiveness & efficiency
- More integrated organization



Private Sector Growth in the Southeast









- **•** Montgomery office had early resources and focus
- Alumax project provided opportunity for air work collaboration -Wayne Hanson
- GE wastewater project demonstrated opportunity to follow clients, transfer technology and skills-Jay Mackie, Dave Ellison
- Numerous pulp and paper projects-John Lee
- Gulf Oil Craig Zeien
- Celanese wastewater Ken Cable & Tom Pennela



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Florida Here We Come

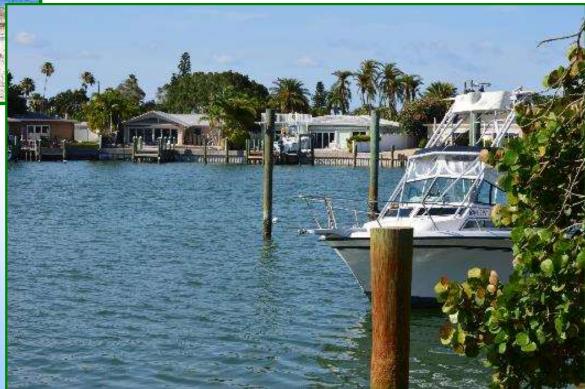




The Shock of it All



My image from Denver





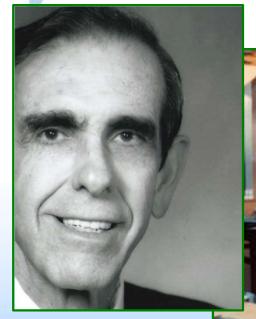
The Shock of it All

10 Da	y Weath	ner - Ga	sinesville, FL				<image/>	
As of 1:5	6 pm EDT			Н	umidity			
Today	91°/73°	-	Thunderstorms	/ 93%	🔩 SSE 7 mph	~		
Tue 05	91°/73°	-	PM Thunderstorms	/ 56%	🗳 SE 7 mph	~		
Wed 06	95° /74°	-	Partly Cloudy					
Thu 07	92° /74°	-	PM Thunderstorms					
Fri Oð	93° /74°	-	PM Thunderstorms					
Sat 09	92°/75*	-	PM Thunderstorms					
Sun 10	88 °/72°	-	Scattered Thunderstorms				Start And Start	
Mon 11	85°/73°	-	Scattered Thunderstorms	100	- ka			
Tue 12	90° /73*	*	Scattered Thunderstorms		- Shift		35	
Wed 13	90° /74°	-	Scattered Thunderstorms					
Thu 14	89 °/73°	-	Scattered Thunderstorms		MAN CLA	and and the		
Fri 15	89°/73°	-	Scattered Thunderstorms		California and	1		
Sat 16	88°/73°	-	Scattered Thunderstorms	/ 58%	🗳 SW 9 mph	~	The realty	



The Role of Gainesville

Resource center for Florida and Design Center for East



Ignacio Garcia



Jim Hawkey leads project team



The Culture Needed Help: Academic vs. Collaborative



How do we learn to work as a team?



Our communication was "State of the Art"



Wireless Communication

High Speed Internet



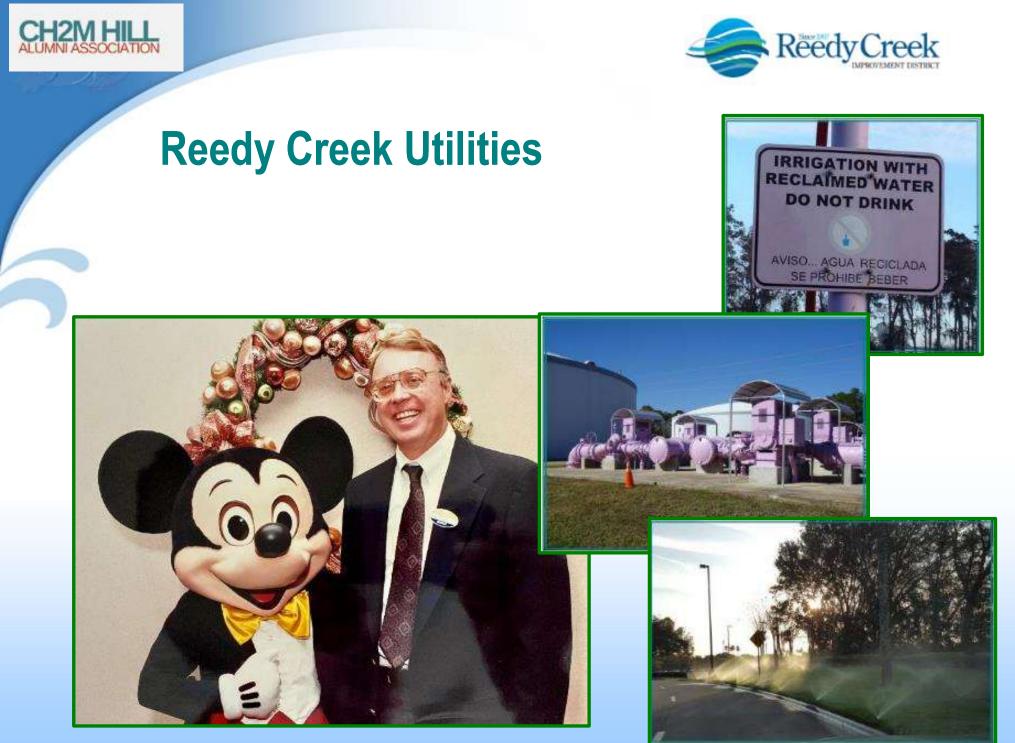


The Advent of CAD (Computer Aided Design)

Intergraph (CVO & WDC) vs. AutoCAD (GNV)?



And they were low cost to boot



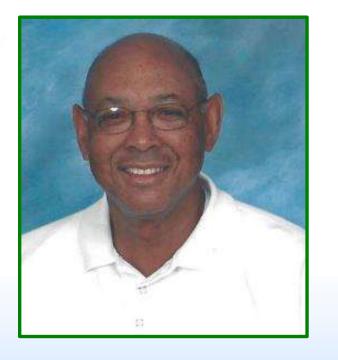


Regional Consolidation: 1993





Help with the Politics was critical



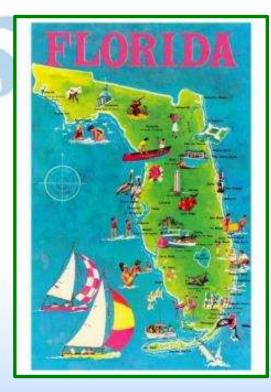
• State & Local Politics

- League of Cities
- Forum for Black Public Administrators

Willie Loud



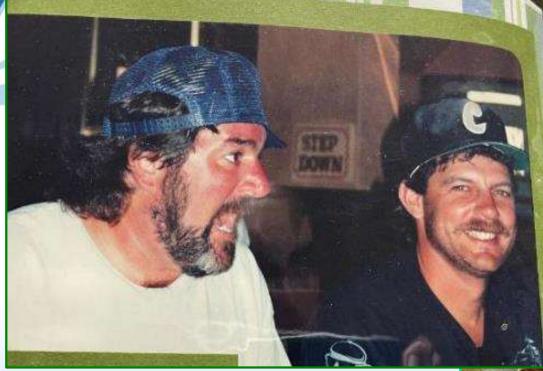
Florida Weirdness & Innovation:



- Aquifer Storage and Recovery (ASR)
- Indoor Air Quality
- Lightning Studies
- Mitigation Banking
- Wetlands Treatment
- Everglades Projects
- Amusement Parks
- Cruise Ship Terminals
- Sole Source Negotiated Design Build
- Airport Runway Extensions and Restorations
- Key West: Contract PWorks



People, as always, were the key to our success



Bob² at Bend Softball Tournament





And a fond farewell...





How CH2M HILL grew into a national firm

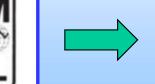
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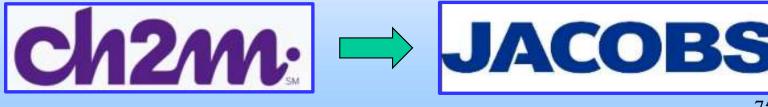


Jacobs focuses on providing sustainable services well into the future

- Sold chemical group after acquiring CH2M HILL environmental
- Long standing question of can consulting and EPC co exist
- Still people, projects, and clients
- People have different skills and training
- Projects are quite different, AI, cyber security, health study, and heavy construction
- Many of same clients but different projects
 - MARTA program management of construction versus environmental services
 - NASA development of delivery systems versus environmental services
- Result is dramatic changes in staff and locations







Jacobs Engineering now Jacobs Solutions

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