

The California Pavement Preservation Center (CP² Center)

**R. Gary Hicks
CSU, Chico**

**Prepared for Rocky Mountain West Pavement preservation
Partnership Annual Meeting**

Reno, NV

October 4-6, 2011



NEED FOR A PAVEMENTS CENTER

- Caltrans established the California Pavement Preservation Center on July 1, 2006
- Purpose is to accommodate the needs for pavement preservation for both governmental agencies and industry



<http://www.cp2info.org/center>

MISSION STATEMENT



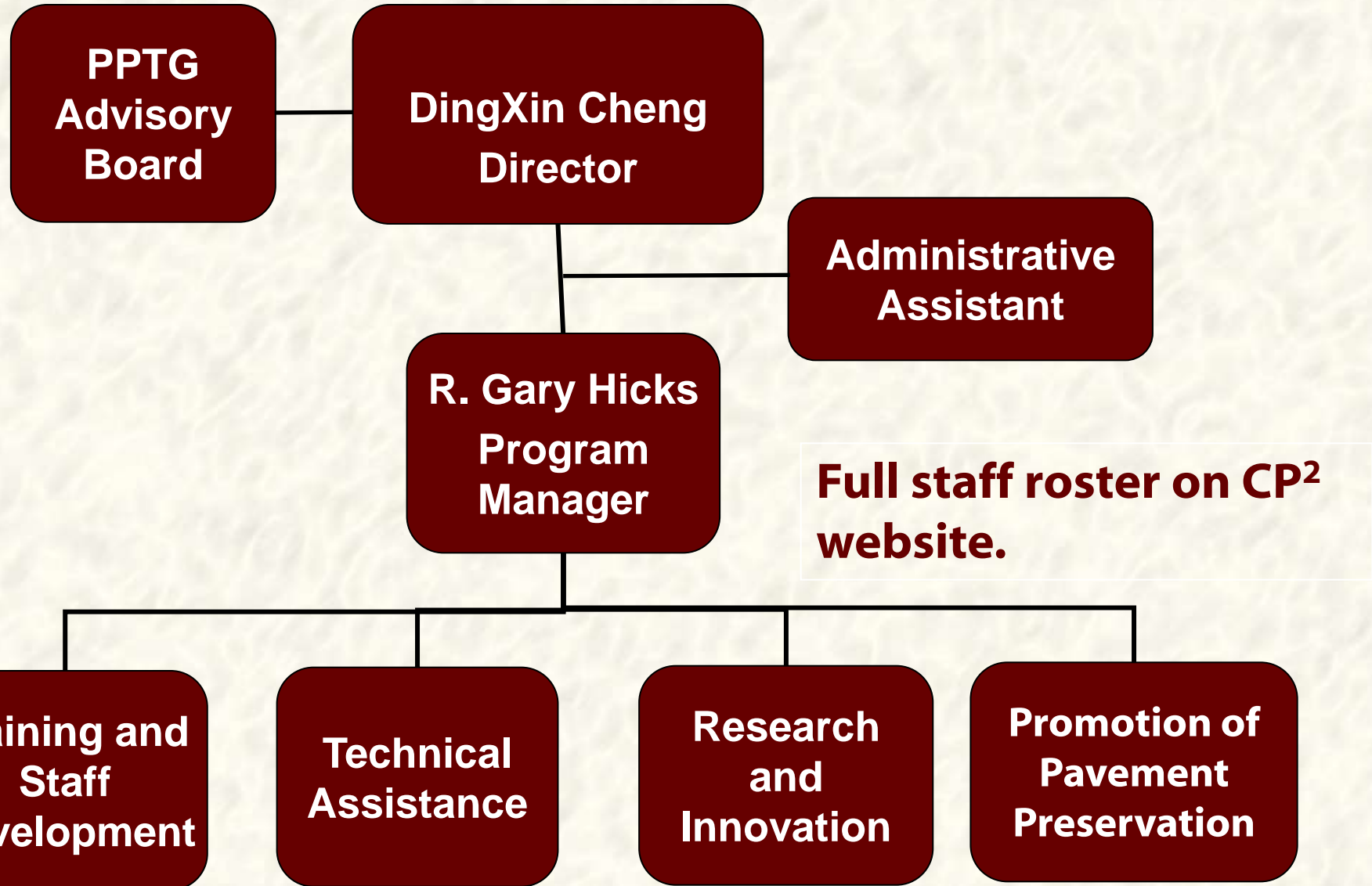
To serve as a leader in a partnered effort between government, industry and academia participants to advance and improve pavement preservation practices through education, innovation, applied and practical research, technology transfer, and implementation.

CENTER OBJECTIVES

- **Serve as a technical resource for pavement preservation activities within the state of California.**
- **Educate others about the benefits of pavement preservation in partnership with the Caltrans and industry. This would involve educational programs at the university as well as distant learning opportunities.**
- **Enhance pavement preservation knowledge through research and training.**
- **Advise and assist others to establish a pavement preservation program.**



CENTER ORGANIZATION



CENTER'S GOALS/SERVICES

- **Become a credible 3rd party for Caltrans, local agencies and industry**
- **Experts in evaluation of new products and innovation in pavement preservation**
- **Partners in conducting pavement preservation research and implementing practical findings**
- **Promoting useable pavement preservation tool (seal coats, overlays, HIR, and CIR)**
- **Assist with forensic pavement studies**

PARTNERSHIPS/RESOURCES



- Caltrans
- Pavement Preservation Task Group (PPTG)
- Rocky Mountain West Pavement Preservation Partnership (RMWPP)



- Federal Highway Administration (FHWA)



- National Center for Pavement Preservation (NCPP)



- American Association of State Highway Transportation Official (AASHTO)



- Foundation for Pavement Preservation (FP2)

CALTRANS

- Provides the seed money for the center
- Provides direction on the operation of the center
- Identifies many of the work elements for the center
- Reviews the work of the center



PPTG

- Partnership between Caltrans, other agencies, industry, and academia
- Provides advice and technical oversight for the center
- Assists in identifying work elements for the center
- Provides feedback on the center operations

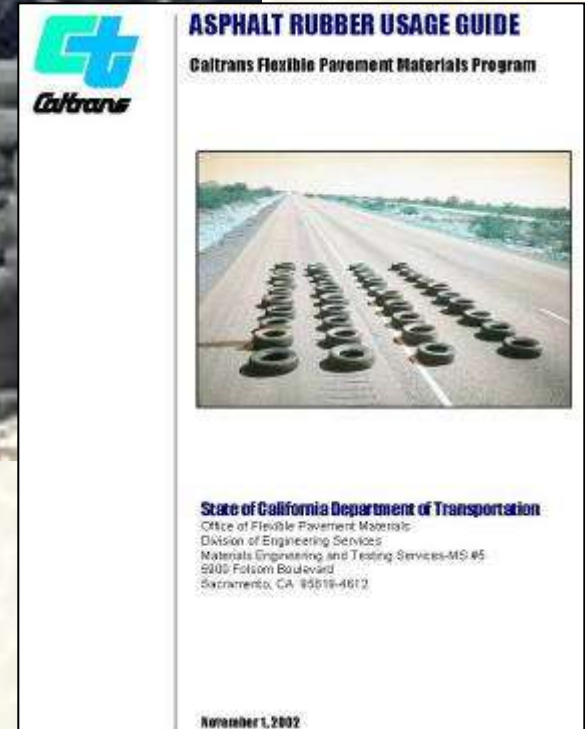


INDUSTRY

- **Assists the Center with instruction**
- **Provides grants for equipment and scholarships**
- **Facilitates practical research-lab and field**
- **Provides opportunities for internships**
- **Provides industry interns to work in the Center**

OTHER PARTNERS

- **CalRecycle**
 - City of Roseville
 - City of Stockton
 - Other counties and cities
- **Local agencies (MSA, APWA, MTC)**
- **Other Agencies**
 - Alaska DOT & PF
 - FHWA



INTERACTION WITH OTHER PAVEMENT CENTERS

- Partnered Pavement Research Program, University of California
- NCPP – Michigan State
- Texas PP Center – UT Austin
- NCAT - Auburn University
- Concrete Centers – Arizona State, CSU Chico, Iowa State, and others



FACILITIES – CURRENT & PLANNED

- Center is located near the University campus
- Concrete labs in Langdon Hall are being updated using industry funds
- Asphalt lab is being developed
- Both labs will eventually co-exist in one facility



Managing our investments is important and big business

MEASURES OF SUCCESS OR FAILURE

- **Quality of educational & outreach programs**
- **Technical assistance provided**
- **Implementation of research and new technologies**
- **Successful Internship program**
- **Improvements in the pavement preservation process**



INITIAL WORK PLAN –A PARTNERING PROCESS

- **Strategic planning meeting held August 29-30, 2006**
- **Identified the major issues/challenges facing the pavement preservation industry in California**
- **Developed a practical vision for the Center for the first 3 years**
- **Prioritized issues based on need and value added**
- **Charted a roadmap for the Center**

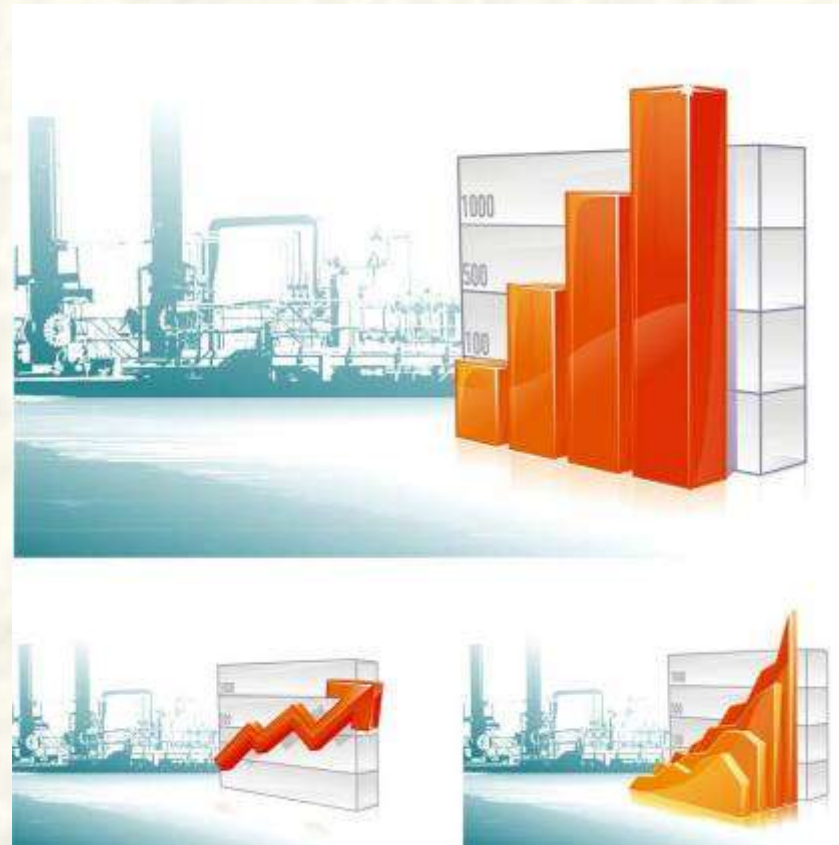
Activities During the 2007-2010

- **Five tasks**
- **Funded at \$600,000 per year**
- **Project directed by Shakir Shatnawi**
- **Completed numerous deliverables**



TASK 1: DETERMINE AND DEMONSTRATE BENEFITS OF PAVEMENT PRESERVATION

- **Actions**
 - Track performance of existing strategies
 - Determine/document benefits
 - Conduct LCCA
- **Deliverables**
 - White paper for decision makers
 - Report to document benefits of pavement preservation



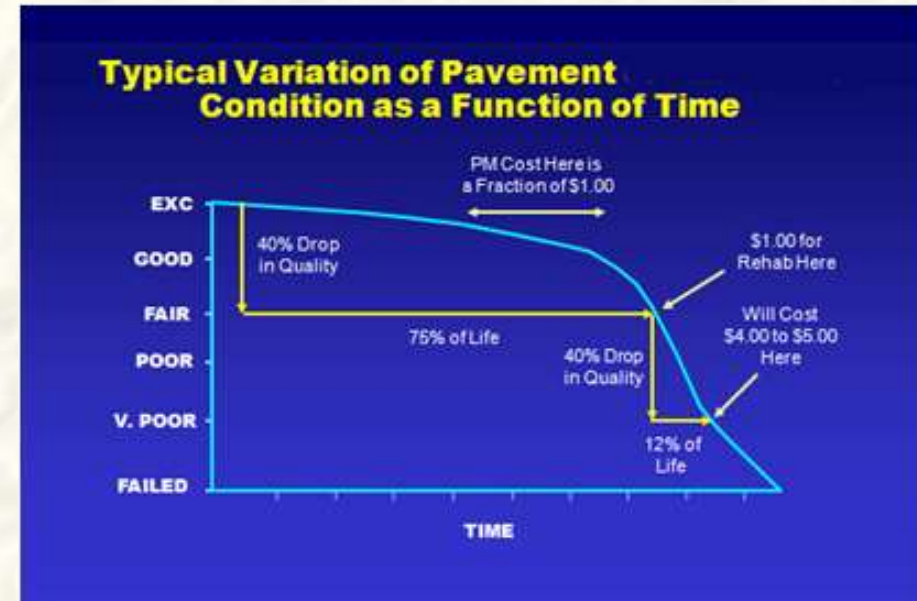
TASK 2: PROVIDE TRAINING AND EDUCATION

■ Actions

- Develop training sessions & workshops on the importance of pavement preservation
- Develop a training session on the MTAG
- Assist Caltrans in planning & conducting an annual conference on pavement preservation

■ Deliverables

- Training sessions and workshops on the MTAG
- Conduct Annual conferences
 - First International conference



www.cp2info.org/conference

TASK 3: IMPROVE PAVEMENT PRESERVATION PERFORMANCE

■ Actions

- Update the MTAG for asphalt and concrete pavements
- Define industry standards for various treatments
- Recommend updates for improved specifications



■ Deliverables

- Updated guides and associated training
- Improved inspection procedures (guides and checklists)
- Updated trigger values for selecting treatments
- Updated specifications for improved quality with pavement treatments

TASK 4: ENCOURAGE INNOVATION AND TECHNOLOGY TRANSFER

■ Actions

- Streamline the process for implementing innovation and new products
- Work with industry to evaluate new technologies and processes



■ Deliverables

- Improved process for innovation, Innovation Database, Pavement Preservation Database
- Reports/memos/ research notes on new technologies, materials, processes and tests
- Technology transfer through various media.

TASK 5: PROVIDE TECHNICAL ASSISTANCE

■ Actions

- Assist with forensic investigations
- Conduct pavement reviews on new pavement technologies
- Provide technical consultation on pavement preservation

■ Deliverables

- Reports on both successes and failures in our pavement reviews
- Help desk on recommendations for pavement preservation



TASK 6: PROMOTE EFFECTIVE PAVEMENT PRESERVATION

■ Actions

- Development of fact sheets and brochures
- Participation at agency and industry meetings



■ Deliverables

- Participation at major agency and industry meetings
- Develop informational materials (newsletter, fact sheets, brochures, advisory guides)
- Development and delivery of presentations
- Maintaining the website

The Challenges

- **New Programs Need Champions!**
 - **Caltrans**
 - **PPTG**
 - **CP² Center**
 - **Industry**
- **Keeping good roads in good condition**
- **Demonstrating Early Benefits**
- **Finding Dedicated Funding**

Activities from 2010 to Present

- **New contract issued in 2010**
- **Scope of work and budget reduced**
- **Efforts now contained in 4 tasks**
- **Project Directed by Peter Vacura**



CP² Center

35 Main Street, Suite 205

Chico, CA 95929-0603

Task 1. Training and Education

- **Updating the MTAG**
- **Assisting with the annual conference**
- **Conducting workshops**



Task 2 Monitoring Innovation Projects

- **Warm mix RAC and chip seals**
- **DBR using polyester backfill**
- **In place pavement Recycling-hot and cold**
- **Others**



Task 3 Technical Assistance

- **PPTG support**
- **Fog and rejuvenating seal specs**
- **Rubberized chip seals in hot climates**



Task 4. Promotion of Pavement Preservation

- Newsletters
- Tech briefs
- Fact sheets
- Website
 - PP Database
 - Innovation DB
- Experienced Staff
- Laboratory
- More

The screenshot displays the website for the CP² CENTERS Pavement Preservation Treatment Database, powered by Caltrans. The interface includes a search bar and navigation buttons for different treatment types: Search Treatments, Flexible Pavement Treatment, Rigid Pavement Treatment, and Composite Pavement Treatment. Below these are buttons for adding new treatments: Add New Flexible Pavement Treatment, Add New Rigid Pavement Treatment, and Add New Composite Pavement Treatment. The main content area features a map of the Western United States (California, Nevada, Utah, Arizona) with numerous red location pins indicating treatment sites. The map is powered by Google and includes a legend for Map, Satellite, and Hybrid views. The footer of the map area contains the text: "Map data ©2011 Europa Technologies, Google, INEGI - Terms of Use".

SUMMARY

- **Caltrans established CP² Center on July 1 2006**
- **Partnered process used to develop work plans**
- **Center task orders started January 2007 and renewed in 2010**
- **Challenges**



Questions

Dr. R. Gary Hicks

Program Manager

CP² Center

530-898-3685

rghicks@csuchico.edu



THANK YOU

Just the Beginning

Keeping good roads good



<http://www.cp2info.org/center>

