

NOAA REPORT



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North America Soaking Up Carbon Dioxide: A study by NOAA and university scientists indicates that North America is absorbing a large amount of carbon dioxide from the atmosphere. During the past decade, evidence had already suggested the existence of a large land "sink" of atmospheric carbon dioxide at warmer areas in the Northern Hemisphere. Carbon dioxide is a greenhouse gas that is closely associated with global warming.

In an article appearing in the Oct. 16 issue of Science magazine, scientists from NOAA, Princeton University, and Colum-

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bia University say that they have now, tentatively, identified that "sink" as being mostly North America, at least during the period studied, from 1988-1992.

Iceberg Breaks Free from Antarctica: A titanic-sized iceberg, larger than the state of Delaware has broken or "calved" off the Ronne Ice Shelf in Antarctica. The iceberg, named A-38, is approximately 92 miles long by 30 miles wide, and covers an area roughly 2,750 square miles. It calved off the second largest ice shelf in Antarctica, located in the southern Weddell Sea.

Mary Keller, a scientist at the National Ice Center in Suitland, Md., sighted the iceberg using satellite data. The data are from an instrument on a satellite in the Defense Meteorological Satellite

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Mammoth Omnibus Bill Includes NOAA Funding

NOAA was a beneficiary of the recently passed half-trillion dollar omnibus Congressional Federal budget bill, but the increased funding may be revisited in the summer.

According to Congressional Quarterly magazine's analysis of the 40-pound, 4,000-page bill which encompassed one-third of all Federal government spending for Fiscal Year 1999, White House and Congressional negotiators increased NOAA's FY'99 spending authority substantially over last year's level by \$209

million to \$2.208 billion.

The overall \$33 billion Commerce-Justice-State bill that included the NOAA money was rolled along with several others into the omnibus package. However, it differs by lasting only until June 15, 1999, when the Supreme Court is expected to make a ruling on the legality of statistical sampling in the upcoming Year 2000 Census, which is conducted by the Census Bureau, part of the Department of Commerce. Congress wants to revisit the funding *continued on page 6*

Now the Results: Next Steps in Survey Feedback Action Process Coming

Approximately 70 percent of NOAA employees participated in the survey phase of Survey Feedback Action (SFA) which ended on October 11. Survey results and workgroup reports will be provided to supervisors this month. This workgroup report will be shared with employees during the initial feedback meeting.

Survey Feedback Action is the first phase of a two phase organizational



assessment sponsored by the NOAA Diversity Council. The data obtained through SFA will be analyzed and rolled up into Phase 2 of the organizational assessment, where it will be combined with information obtained through interviews with key officials, employee focus groups and document reviews.

The goal of SFA is multi-fold:

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Clean Water Plan Aims to Corral Runoff Pollution from Animals

Animal waste from farms are a significant source of water pollution. In response, NOAA, as part of the Administration's Clean Water Action Plan (CWAP), and its CWAP implementation partners, USDA and EPA, announced a plan to improve America's water quality and reduce public health risks associated with animal feeding operations.

EPA Administrator Carol Browner called the plan, known as the draft USDA-EPA Unified National Strategy for Animal Feeding Operations (AFO), a major step toward



Restoring & Protecting America's Waters

CLEAN WATER ACTION PLAN

cleaning up America's waterways by working together to curb a significant source of water pollution—animal wastes that run off into our waterways. "This draft plan is the

most aggressive strategy ever proposed to address this problem and protect our nation's rivers, lakes and streams," Browner said.

NOAA is especially involved in efforts to combat polluted runoff through its partnerships with coastal states in implementing the Coastal Nonpoint Pollution Control Program under the Coastal Zone Management Act (CZMA). Coastal nonpoint programs provide a road-map for coastal states to follow in dealing with polluted runoff problems comprehensively. These programs document the capabilities of the state to control nonpoint pollution. "NOAA and EPA completed the review and conditional approval of the first 29 Coastal Nonpoint Programs in June of 1998," said Dr. Nancy Foster, assistant administrator for NOAA's National Ocean Service. "We can clearly make a difference in our nation's water quality through these programs as part of the Clean Water Action Plan," she said.

Animal feeding operations are livestock-raising operations, such as hog, cattle, dairy, and poultry farms, where animals are kept and raised in confined areas. When not properly managed, animal waste can run off into nearby waterways. The AFO Strategy identifies nonpoint sources (runoff from urban and rural areas) as the most important remaining source of water pollution and provides a coordinated effort to reduce polluted runoff from one of the most important sources—animal feedlots.

Nonpoint source pollution is a prime suspect in contributing to conditions that have led to Pfiesteria and other



Commerce Deputy Secretary Robert Mallett (left) and Oakland, Calif., port director Chuck Foster on a harbor pilot boat in San Francisco Bay last month.

Deputy Sec. Mallett Visits SF Ports

Stressing environmental protection, Commerce Deputy Secretary Robert Mallett (left) toured San Francisco Bay last month, saying that balancing the many industrial, commercial, and recreational uses of the waterway with environmental concerns is a job for which NOAA and the Commerce Department are well suited.

"Environmental protection is economic development," Mallett said. "You can't have a strong economy over the long haul unless you protect natural resources. NOAA does a good job of delivering ports and the shipping industry the science and environmental information they need to operate safely and efficiently." ☺

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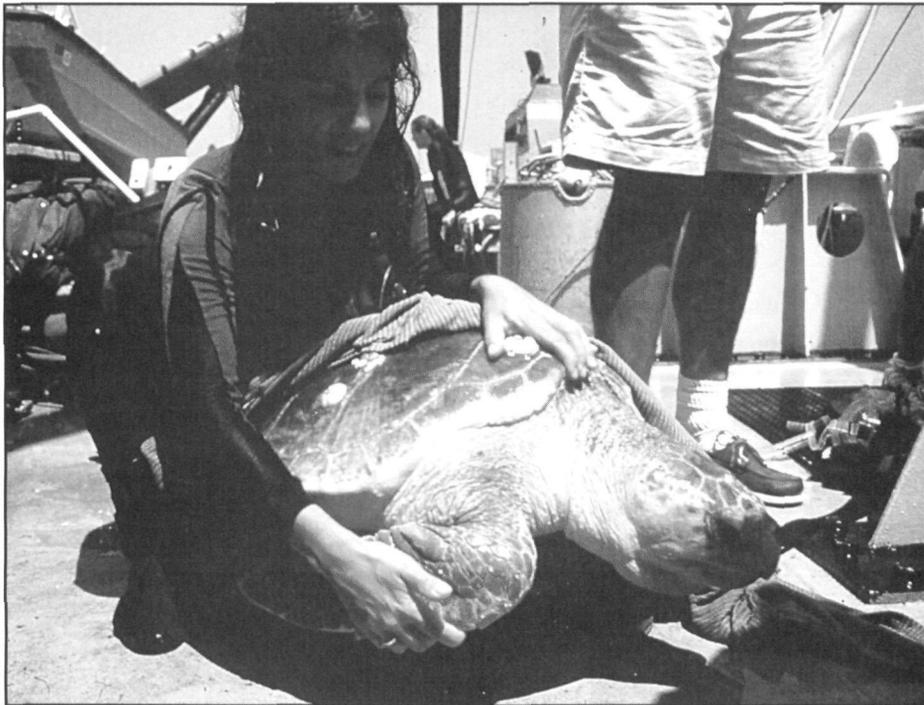
Threatened Sea Turtle Cracks Shell; Gray's Reef Staff Puts Him Back Together Again

Humpty Dumpty may have had a great fall, but this similarly named turtle had an even better summer.

The location of the Gray's Reef National Marine Sanctuary, off the coast of Georgia, makes it one of the largest reef habitats found off the southeast coast, an important habitat for sea turtles. During a NOAA research cruise this summer, sanctuary researcher Alex Score was on the lookout for a loggerhead sea turtle. Since 1996, the sanctuary's satellite tracking project has studied the movements and behavior of adult and juvenile loggerhead sea turtles.

This research helps scientists to learn more about these threatened marine creatures. Recent evidence suggests that the number of nesting females in Georgia and South Carolina may be declining. Other biologists believe that there is a separate population of loggerheads in Georgia and South Carolina that may even be considered endangered.

In July, Score and her dive team discovered a likely candidate underneath the reef ledges. The team captured the turtle in a large mesh



KAREN ANGLE

Alex Score, a Gray's Reef National Marine Sanctuary researcher, checks out Humpty Dumpty, an injured loggerhead turtle, who was nursed back to health. The turtle was fitted with a small transmitter to track its journeys.

net and brought it 60 feet to the surface. After lifting the turtle onto the deck of the NOAA ship *Ferrel*, it was apparent that the turtle had sustained a severe injury—its shell or carapace was cracked open from head to tail.

Wildlife officials on hand from the Fish and Wildlife Service and Georgia Department of Natural Resources examined the turtle with sanctuary staff, and agreed it needed immediate medical attention. The turtle was taken to shore and transferred to Marineland Florida for daily antibiotic treatments to stave off infection and allow time for the shell to heal. Federal and state biologists believe that the turtle would have succumbed to the infection in two to three weeks had it not been recovered for treatment.

The turtle, now christened Humpty Dumpty, was returned to Gray's Reef sanctuary waters in good health, fitted with a small soda can-sized transmitter and sent on its way on September 27 with the help of Dr. Sylvia Earle, National Geographic Explorer-in-Residence and leader of

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Plan to Control Animal Waste Runoff

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harmful algal blooms around the nation. NOAA plays a major role developing a Federal response plan for Harmful Algal Blooms (HAB) and other major events in coastal waters, and implementing the National HAB Research and Monitoring Strategy.

NOAA's response in dealing with nonpoint source pollution is important to achieving the goals of the

Clean Water Action Plan—clean, healthy waters for all Americans.

For more information on the Clean Water Action Plan, visit the plan's Web site at: <http://www.epa.gov/cleanwater>. EPA and USDA are currently taking public comments on the draft strategy. Copies of the draft strategy are available at <http://www.nhq.nrcs.usda.gov/cleanwater/afostрат.htm> or <http://www.epa.gov/owm/afostrat.htm>.

—Kim Swaggard and Marc Suddleson ☺

Focus On...

Our Muppet in Havana: Miss Piggy, Kermit, and Gonzo Fly Down to Cuba to Scout Out Hurricane Georges

NOAA's three "hurricane hunter" aircraft may sport lovable Muppets character logos, but their mission to fly around and through deadly hurricanes is no laughing matter. Just before Hurricane Bonnie rolled in and blasted the coast, the aircraft flew numerous flights—the two WP-3 Orions through her turbulent eyewall and the Gulfstream-IV jet through her steering currents—to help forecasters determine the storm's path and intensity. This was the first time the aircraft had worked in conjunction with each other during the same hurricane.

Hurricane Georges provided another challenging first: all three aircraft flew in Cuban air space to find the exact position of the eyewall for the National Hurricane Center, as well as to collect data for track and intensity predictions. One of the P-3s actually flew directly over Cuba, which may be a first for NOAA.

Hurricane aircraft almost never fly over land because hurricanes spawn tornadoes; they fly through hurricanes over the open seas.

'PRETTY UNUSUAL'

"It was pretty unusual not only to fly directly over Cuba but to fly over land," said Cmdr. Ron Philippsborn, a NOAA Corps pilot who was aircraft commander of the P-3 that flew over Cuba. "Tornadoes can form inside hurricanes over land, and



NOAA's three hurricane hunter aircraft have Muppet characters—Gonzo, Kermit, and Miss Piggy (not shown) on their sides.

planes try to stay away from that because safety is a top priority. However, the National Hurricane Center needed to pin down the location of the eye, and it happened to be over Cuba. After assessing the situation and making a couple of test passes near the shore, we decided storm conditions and the land configuration were favorable enough to attempt the flight."

"The Cubans usually cooperate with NOAA when it comes to hurricane reconnaissance in their air space, because the data gets fed back to them and they're as interested in that as we are," Philippsborn added.

Forecasters must know where the eye of the storm is before they can accurately predict the track of the hurricane. NOAA is the only Federal agency with hurricane tracking capabilities that is authorized by

Cuba to fly in its airspace. NOAA aircraft can fly up to Cuba's coastline without special clearances, but must file flight plans about a day (as opposed to a couple of hours in the United States) ahead of time. Special approval, however, had to be obtained before the aircraft could fly over land.

TV CREW ALONG FOR THE RIDE

Hurricane Georges also marked another first for the NOAA hurricane hunters: a television crew from the CBS news program *48 Hours* flew aboard a P-3 during three flights through Georges, beginning with Cuba, then Key West, and ending with the hurricane's landfall along the U.S. Gulf coast.

According to Philippsborn, having the CBS crew on board was quite an experience. "The crew got lots of

good footage. When we felt it was safe for her to do so, the producer even went so far as to hang from the handrail along the roof of the P-3 during light turbulence so she could be filmed swaying back and forth. It was tricky getting enough turbulence so she could get the effect she wanted, but not so turbulent that she'd get hurt."

Because the aircraft take off from one location but land at another (far enough away from the hurricane's cross winds to be able to take off again) when on a mission, all the flight personnel who will be on duty during any part of the mission have to fly at all times. During Hurricanes Bonnie and Georges, each of the aircraft had three pilots, who rotated during the flights to get a measure of relief from the continual tension. Among the maintenance and flight engineers and scientists, there was some rotation aboard the P-3s during the teeth-shattering flights, but no rotation was possible for the G-IV flight personnel and scientists, who had no relief personnel to take over for them.

Experienced NOAA pilots train for several years to fly through hurricanes, and NOAA's safety record is impeccable. A great degree of skill, professionalism, stamina and courage is also required of the engineers and scientists who fly on these missions. Hurricane flights are not for the faint of heart or the mediocre. Sometimes there's nary a break, either. In less

"The Cubans usually cooperate with NOAA when it comes to hurricane reconnaissance in their air space, because the data gets fed back to them and they're as interested in that as we are," said Cmdr. Ron Philippsborn, the NOAA Corps pilot who was aircraft commander of the P-3 that flew over Cuba.

than six weeks, NOAA flew missions for the first four hurricanes of this season—Danielle, Bonnie, Earl and Georges.

Hurricanes Bonnie and Georges were the strongest storms, however, and each took their toll on NOAA's dedicated—and exhausted—hurricane flight personnel and scientists. Nine grueling hours were spent in flight for every 15 hours spent on the ground (for maintenance, filing flight plans, eating, and—if they were lucky—two or three hours of

sleep). Flights during Hurricane Georges alone occurred each day and night from Sept. 18 until the storm made landfall on Sept. 28. Hurricane flights end once the storm hits land; NWS's land-based technology provides the data needed by the National Hurricane Center.

With any luck, NOAA's hurricane hunter personnel will have gotten enough sleep before they're off again to fly the not-so-friendly skies of nature's fury.

—Jeanne Kouhestani ☺

Endangered Turtle's a Good Egg

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the Sustainable Seas Expedition.

After swimming north for a few days, Humpty Dumpty returned to sanctuary waters on October 5, before heading south to Florida.

On Monday, October 12, the sea

turtle was traveling back in the direction of Gray's Reef Sanctuary, an important habitat for sea turtles.

Check out Humpty Dumpty's meanderings on the Internet at <http://www.sanctuaries.noaa.gov>.

—Nancy O'Donnell ☺

New NOAA Budget Enacted As Part of 4,000-Page Omnibus Spending Bill

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issue in light of the anticipated decision.

All line offices received increases over FY'98 except NESDIS, which had requested less funding, but still received more than requested.

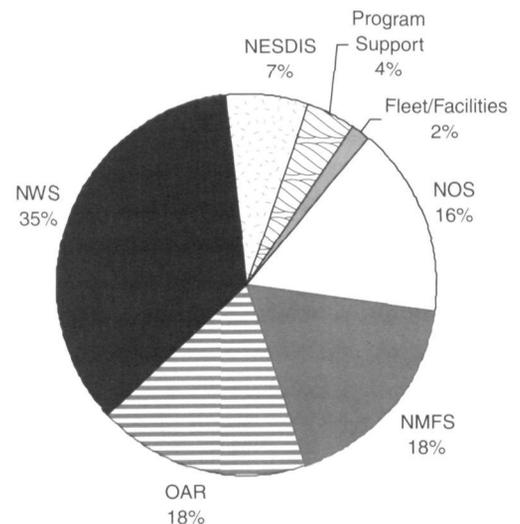
The bill provides \$258.2 million for NOS, an increase over both the \$233.7 million FY '98 figure and the \$243.4 million White House proposal, but less than the Senate-recommended \$267.8 million. Ocean resources conservation and assessment programs are boosted from \$76.1 million in FY'98 to \$82.9 million in FY'99, while ocean and coastal management programs are hiked from \$67.1 million to \$80.9 million.

NMFS will see a budget of \$382.6

million, up from FY98's \$351.1 million and higher than the \$351.4 million request. The conservation, management and operations account rose from \$126.2 million in FY '98 to \$138.6 million, lower than the \$142.4 million it requested. Within the Conservation and Management Operations account, protected species management programs were hiked from \$39.9 million to \$51.9 million, while the fisheries development program was left at nearly \$11 million.

Oceanic and Atmospheric Research was allotted \$287.4 million, above both its \$251.2 million request and the \$277.7 million FY '98 figure. Climate and air quality research rose from \$114.8 million in FY98 to \$122.4 million this year, but the GLOBE program

NOAA FY99 BUDGET



was cut in half, to \$2.5 million. Atmospheric programs will see \$46.5 million, down from FY98's \$47.5 million but above the \$45 million request. The Ocean and Great Lakes programs rose from \$100.5 million to \$105.7 million.

National Weather Service will have a budget of \$560.7 million, below the \$564.4 million administration proposal but above the \$520.3 million FY '98 level. Operations and research funding rose from \$467.3 million to \$498.5 million.

NESDIS received a budget of \$109.9 million, more than the requested \$100.4 million but below the \$134.7 million FY'98 figure. The environmental observing services program will receive \$53.3 million, a \$3 million increase from FY'98, and environmental data management systems rose from \$46.3 million in FY'98 to \$52.6 million in FY'99.

Funding for NOAA's Procurement, Acquisition and Construction (PAC) account totaled \$584.7 million. This is a net increase of \$93.0 million over the FY'98 enacted amount but

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That Manny—He's Certainly...Uncanny

ABC/Disney character "Manny the Uncanny" visited NOAA's Science Center last month to interview meteorologist Dave Reynolds on the science and technology used in daily weather forecasting. The segment will air during the ABC Saturday morning cartoon block later this year.

Now the Results: Next Steps in Survey Feedback Action Process Coming

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- to create a dialogue between managers and employees about organizational performance and working conditions;
- to help NOAA establish baseline measures to track progress at the workgroup and organizational levels and to use this information to improve the way we do business;
- to empower employees to identify solutions to issues within their control;
- to provide employees with a vehicle for recommending improvements; and
- to help NOAA identify areas for improvement that cross workgroups and organizations.

Improvement is Everyone's Responsibility

SFA is a catalyst for creating action and positive change. Your opinions were voiced during the survey phase—now it is up to you and your supervisor to get together and make lasting improvements during the Feedback and Action Meetings. It is through the SFA Feedback and Action meetings—when the survey results are interpreted and discussed—that the true benefits of being part of the process are brought to light. For instance, the meetings provide a way for employees to raise issues of concern and to effect change within your workgroup. They also allow employees to identify issues that the workgroup has no control over and raise these issues to higher levels for action.

There are also risks associated with any change, and SFA is no exception. Improvements can only happen if we accept the challenges and risks and take part in the action to help improve NOAA's working environment. For example, employees may be disappointed if change does not happen right away, or they may fear retaliation

by a manager or other workgroup member. Also, making things better may mean more work and responsibility. This can be frustrating, especially during a time when employees are called upon to do more with less.

As a workgroup, you need to highlight the benefits and address the risks during the Feedback and Action Meetings and strive to make the benefits of SFA outweigh the risks. Accept these challenges and take part in the action to help improve NOAA's working environment.

To Use or Not to Use a Facilitator?

Improvement is driven by individuals not organizations and this is why it is important for everyone's voice to be heard during Feedback and Action meetings. When an employee is not heard or given the power to implement improvements within their control, or if an employee's ideas are ignored, they will usually just give up. A facilitator can help create an inclusive process where everyone has the opportunity to contribute.

For this reason, NOAA has trained a group of in-house facilitators who can serve as a neutral party to assist workgroups with discussions that

build agreements. Facilitators bring valuable experience to the meetings and they have received special training on the SFA process. Professional facilitators have also been contracted with and are available to facilitate Feedback and Action meetings. We strongly recommend that workgroups use a facilitator.

Remember, if your workgroup is represented by a union, the union representative should be invited to attend the meeting because likelihood exists that management and employees will discuss changes in working conditions. If the union chooses not to send a representative, you can proceed with the meeting as scheduled. ☺

The Office of Diversity makes a number of educational and marketing resources available on SFA. Last month, a Managers Toolkit on SFA was issued to all NOAA managers and supervisors. Currently under development are SFA Guides which will be designed for managers and employees and an all employee brochure addressing questions and answers about the SFA Feedback and Action Meetings. We are also producing a video which is specifically geared to the Feedback and Action Planning processes. ☺

New Budget Part of Huge Spending Bill

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\$2.9 million lower than the \$587.6 million that the Senate recommended and \$46.3 million higher than the \$538.4 the House recommended. Within this net amount, \$9.9 million was provided for NOAA's Class VIII Supercomputer, which represents an increase of \$4.9 million; \$50 million was provided for the Polar Convergence which is a

shift from NOAA's Operations Research and Facilities account; \$178.9 million was provided for the GOES N-Q which represents a \$68 million increase over FY'98; and an additional \$3.5 million was provided for the Boulder Laboratory.

A chart with all the figures for all accounts is available on the Internet at http://www.publicaffairs.noaa.gov/nr/99_table.html. ☺

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Program, which has a spatial resolution of .55 km (.34 miles). NOAA is one of three Federal agencies at the Ice Center, along with the U.S. Navy and the Coast Guard.

NOAA-15 Replaces Older Weather Satellite: NOAA-15, an environmental satellite launched on May 13, has successfully completed engineering tests and instrument calibration and will replace NOAA-12, which was launched in 1991.

NOAA-15, a Polar-orbiting Operational Environmental Satellite, or POES, is the first in a series of five POES satellites with improved imaging and sounding capabilities that will operate over the next 12 years.

"With NOAA-15, we will get better

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measurements of atmospheric temperature and moisture values," said Mike Mignogno, NOAA's POES program manager. "These translate into better information, particularly in the troposphere under cloudy conditions. The result will be accurate, global, tropospheric temperature and moisture data under all sky conditions."

Global Fisheries Issues Discussed: The United States is calling for global agreement to adopt strong, meaningful plans of action to reduce fishing fleet capacity and seabird bycatch, and to take effective steps to manage world shark populations by the end of 2000.

NOAA Deputy Administrator Terry Garcia, the chief U.S. fisheries negotiator, believes the Food and Agriculture Organization will forward effective plans of action to its members following the week-long meeting last month in Rome.

"Many of the world's commercial fish species are overfished, and the chief culprit is too many fishermen chasing too few fish," said Garcia. ☺



BEN MIEREMET

NOAA Administrator Dr. D. James Baker (fourth from left) speaking at the recent meeting of the President's Council on Sustainable Development in Pittsburgh.

NOAA Science Highlighted at Sustainable Development Council Meeting

NOAA science was very much in evidence at the most recent meeting of the President's Council on Sustainable Development (PCSD) in Pittsburgh in late September.

NOAA Administrator Dr. D. James Baker, who has served on the PCSD since its inception in 1993 and has been a key facilitator to find consensus in policy from diverse interests on sustainable communities and development, reported on a set of principles for early action and technology activities for agriculture, buildings, transportation, electric power, industry and cross-cutting actions which could lead to reduced green house gases. One of the major issues the PCSD has been working on relates directly to global climate change and the need for reducing greenhouse gas emissions through voluntary, early action initiatives as well as technology improvements.

The PCSD was also interested in learning the latest about climate change statistics and scenarios. Tom Karl, Director of NOAA's National

Climatic Data Center, made a graphic presentation of the science of climate change which in the end made the PCSD members realize the importance of their contributions to find consensus and how difficult sustainable development may become if future stresses are not minimized.

—Ben Mieremet ☺

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