



# **Tropical Prediction Center/ National Hurricane Center Strategic Plan**

**2002 - 2007**

**Updated August 14, 2001**



**U.S. DEPARTMENT OF COMMERCE**  
**National Oceanic and Atmospheric Administration**  
NATIONAL WEATHER SERVICE

Tropical Prediction Center/  
National Hurricane Center  
11691 SW 17th Street  
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MEMORANDUM FOR: TPC

FROM: Max Mayfield *Max Mayfield*

SUBJECT: Strategic Plan

I am pleased and proud to announce we've completed TPC's first 5-year Strategic Plan and 2-year Action Plan. With guidance from a facilitator, the plans were developed by a team of TPC employees from "customer", staff and partner input. The plans begin to set the direction and tone for how you and I want us to proceed in the years ahead. Improvements to the plans, and to the TPC/NHC itself, will be an on-going process and I urge your continued participation in these efforts. The plans will be reviewed yearly, where they will be updated as necessary. I encourage anyone interested in participating on next year's strategic plan team to talk with their supervisor when the call for volunteers goes out.

Both plans were changed in several, mostly minor, ways from the May 15, 2001 draft. The most notable modification came to the Vision Statement. After extensive discussion by the working group, the previous statement was retained, but expanded to include an envisioned and challenging long-term goal of a society prepared for and safe from hurricanes.

We all need to become very familiar with the plans. Be an advocate for their strengths and work to improve the weak areas. The FY2002-3 Action Plan contains about 40 activities, and many of us are already explicitly tasked in the document. It is important we follow through on these tasks. Ed is responsible for the overall progress. Branch Chiefs and their staffs are to work together to complete individual activities.

I want to close by thanking you for your participation to date, and to caution us that there is some hard (and some fun) work ahead. I am particularly grateful to the working group (Chris Burr, Jiing, Colin, Dan, James, Richard, Frank, Vivian, and Ed) for their time and contributions, and to Ed for initiating the effort and coordinating development of the plans.



## **Mission**

**(Why We Exist)**

To save lives, mitigate property loss, and improve economic efficiency by issuing the best watches, warnings, forecasts and analyses of hazardous tropical weather, and by increasing understanding of these hazards.

## **Vision**

**(What We Hope to Achieve)**

To be America's calm, clear and trusted voice in the eye of the storm, and with our partners, enable communities to be safe from tropical weather threats.

# **TPC Core Products and Services**

## **Operational Products**

- Tropical Cyclone Public Advisory
- Tropical Cyclone Forecast/Advisory
- Tropical Cyclone Discussion
- Tropical Weather Outlook
- Tropical Cyclone Strike Probabilities
- Tropical Cyclone Updates
- Special Disturbance Statements
- Tropical Cyclone Graphics
- High Seas Forecasts
- Offshore waters forecasts
- Tropical Weather Discussions/ Marine Weather Discussions
- Graphical marine products
- Satellite rainfall forecast guidance
- Surface analyses
- Pan-America temperature and precipitation table
- Storm surge forecasts

## **Operational Services**

- Hurricane Hotline Coordination supporting DOD and NWS offices
- Frequent briefings to FEMA and other emergency managers
- Media briefings
- Within-center (cross-branch) support
- Warning coordination with international meteorological services
- Back-up office to Marine Prediction Center, Aviation Weather Center, Central Pacific Hurricane Center, and NWS Honolulu Weather Forecast Office

## **Outreach and Education Products**

- Products and services for the disabled
- Awareness and preparedness presentations
- Guide research community priorities
- Publish applied research results
- Provide post-storm data and documentation

- Storm surge flood plain data for local hurricane evacuation planning
- Conduct outreach programs nationally and abroad
  - Workshops for emergency managers, media, meteorologists and marine communities (national/international).
  - National and international awareness tours.
  - Represent NWS as tropical/marine experts at scientific conferences, and as literature and proposal reviewers
- Participate in marine outreach events

## Primary Customers

- Public
- Emergency Management community – federal, state and local Levels
- Media
- Maritime community – public and private
- Federal agencies – DOD, FEMA, DOS, FAA, DOT, NASA
- NCEP Centers
- NWS Weather Forecast Offices
- International Meteorological Services
- Private sector meteorologists

***The “ultimate” customer is the Public.***

## **Key Stakeholders**

- NOAA/DOC Leadership
- OMB
- Congress
- White House
- State/local governments
- Research community
- Insurance industry
- Tourism industry
- Building/construction industry
- World Meteorological Organization (WMO)

## **Key Partners**

- NOAA Line Offices
- Other NWS components
- DOD
- Research community
- Academia
- International meteorological services
- U.S. Coast Guard
- Emergency management agencies
- Media
- Aviation
- Amateur radio operators
- American Red Cross
- Private meteorological services

## **Strategic Goals**

### **1.0 The Best Products and Services for Our Customers**

Produce accurate, useful and timely watches, warnings, forecasts and analyses.

### **2.0 Education and Outreach**

Increase awareness of hazardous tropical weather and its potential impacts.

### **3.0 Science and Technology**

Increase understanding of tropical weather, and apply advances in science and technology to the forecast process.

### **4.0 TPC Organization and Culture**

Align people, processes, systems, practices and resources to result in a highly-motivated and satisfied workforce to best achieve our mission.

# **Strategic Goals and Objectives**

## **1.0 The Best Products and Services for Our Customers**

Produce accurate, useful and timely watches, warnings, forecasts and analyses.

### **1.1 Improve accuracy of analyses and forecasts.**

1.1.1 Increase commitment to the science of meteorology as the basis for long-term improvements in product accuracy.

1.1.2 Increase commitment to meteorological analysis during the operational forecast cycle.

1.1.3 Reduce occurrence of unusually large forecast errors.

1.1.4 Achieve realistic analyses and skillful forecasts of surface winds and open-ocean wave heights.

1.1.5 Improve storm surge and breaking wave analyses and forecasts.

### **1.2 Enhance the utility of TPC products and services.**

1.2.1 Introduce customer-oriented tropical cyclone and marine graphics.

1.2.2 Extend tropical cyclone forecasts to 5 days.

1.2.3 Minimize customer confusion on product definitions and content.

1.2.3.1 Watches and warnings



1.2.3.2 Tropical cyclone products (especially Public Advisories, Tropical Cyclone Updates and Special Disturbance Statements)

1.2.4 Minimize corrections in products.

1.2.5 Create a line of Spanish language products.

1.3 Enhance the efficiency and effectiveness of real-time communications and coordination.

1.3.1 Expand and tailor the TPC website to better serve customers.

1.3.2 Streamline videoconferencing and conference calls.

1.3.3 Enhance the hotline coordination and technical capabilities to improve operational efficiency.

1.3.4 Make us of partnerships with private sector and international meteorological services.

1.4 Utilize NWS partnerships to ensure delivery of a seamless suite of products and services.

## **2.0 Education and Outreach**

Increase awareness of hazardous tropical weather and its potential impacts.

2.1 Prioritize and implement education and outreach activities driven by highest potential impact targets.

2.2 Optimize customer understanding by strengthening relationships with key partners.

2.3 Promote a multi-disciplinary approach to public response to protection of life and property through partnerships.

2.3.1 Emergency Management Community

2.3.2 Private sector

2.3.3 Academia

2.3.4 International community

2.3.5 NCEP/NWS/NOAA (e.g., forecaster training via Cooperative Meteorology, Education and Training program)

2.3.6 Marine community

2.4 Increase data availability and dissemination of scientific and other publications.

2.5 Expand formal mechanisms for customer feedback.

2.6 Promote outreach to special-needs populations.

### **3.0 Science and Technology**

Increase understanding of tropical weather, and apply advances in science and technology to the forecast process.

- 3.1 Promote and participate in a robust tropical meteorological research community.
- 3.2 Guide the research community agenda in support of TPC customer priorities.
- 3.3 Increase rate of infusion of leading edge science and technologies to ensure delivery of the best products and services, through:
  - 3.3.1 NOAA laboratories
  - 3.3.2 United States Weather Research Program
  - 3.3.3 Hurricane Testbed
  - 3.3.4 In-house activities
  - 3.3.5 Other research institutions (e.g., Cooperative Institute for Tropical Meteorology)
- 3.4 Enhance computing infrastructure and staff capabilities to support operational activities and accelerate technology transfer.
- 3.5 Promote development and implementation of enhanced observational platforms.
- 3.6 Encourage and increase participation in development and assessment of numerical guidance for tropical forecasting.

#### **4.0 TPC Organization and Culture**

Align people, processes, systems, practices and resources to result in a highly-motivated and satisfied workforce to best achieve our mission.

- 4.1 Increase long-term funding stream to ensure achieving mission goals.
  - 4.1.1 Encourage customer program advocacy.
  - 4.1.2 Better communicate TPC products and services in terms of benefits to the nation and world. Partner with NCEP leadership to educate Congressional, DOC/NOAA leadership on benefits of TPC.
- 4.2 Promote a working environment that optimizes product quality within operational time constraints.
- 4.3 Implement creative recruitment and retention practices to maintain and enhance a diverse TPC workforce.
- 4.4 Implement creative staff augmentation solutions to achieve mission commitments.
- 4.5 Optimize use of staff and other resources.
- 4.6 Increase commitment to professional training and development in:
  - 4.6.1 Science
  - 4.6.2 Technology
  - 4.6.3 Customer service
  - 4.6.4 Stress management
  - 4.6.5 Management/supervision

#### 4.6.6 Media communications

### 4.7 Standardize management practices and protocols in:

#### 4.7.1 Event management and public interaction

#### 4.7.2 Performance management and accountability

#### 4.7.3 Mentoring

#### 4.7.4 Rewards and recognition

#### 4.7.5 Strategic plan management

### 4.8 Improve effectiveness of internal communications to convey organizational standards, plans, program activities, rewards, etc.

#### 4.8.1 Meetings

#### 4.8.2 Intranet

# **Action Plan FY2002-2003**

## FY2002-2003 Action Plan

Obj.	What/How	Resources	Who	By When
<b>Goal 1.0 – The Best Products and Services for Our Customers</b>				
4.5, 4.7.1	1. Develop and implement a supplemental schedule for August-October to maximize staff.  Cost out the plan.	Overtime; comp time.	Managers and staff.	June 2001
1.1.3 Forecast Errors	2. Guide USWRP and research community to deliver background research. (Link to 3.2)	Attend USWRP conferences	Ed	2001-2003
1.2.3 Customer Confusion	3. Incorporate clarification of definitions. a. On the Outlook b. At workshops c. Create a definition and example in a user friendly brochure.	c. Web-based, hard copy.	a. Hurricane Staff b. c. Frank/Todd	a. June 01 b. 2002 c. 2002
1.2 Watches and Warnings	4. Incorporate break points in advisory in a numerical way – digitize. a. Do background work.	Telephone	Ed, OS and private sector	2002
2.5 Customer Requirements	5. Formalize customer requirements process and develop solid business cases for action.		TPC/OS	2001-2002
1.2.1, 2.5 Graphics	6. Assess graphical product needs of customers.	Survey	Frank/OS	June 02

## FY2002-2003 Action Plan (Cont'd)

Obj.	What/How	Resources	Who	By When
<b>Goal 1.0 – The Best Products and Services for Our Customers (Continued)</b>				
1.2.4, 4.2 Corrections	7. Formulate new operational practices. a. Design b. Implement		Ed and Specialists	a. 2001 b. 2002
1.2.5 Spanish Products	8. Spanish products. a. Explore creative partnerships (e.g., private sector, WFOs).		Vivian/Lixion	2001-2002
4.1 Real-time Comm.	9. Secure resources for transmitting forecast/ advisories to marine community.		Chris	2001-2002
1.2.1, 1.3.1 Website	10. Expand visibility of marine products.		Ed, Todd and Dan	2001
1.3.3 Conference Calls	11. Put content of conference call on NOAA Hurricane Conference agenda.		Max	Dec. 2001
1.4	12. Invite RFC to become part of the HLT.	Training	Max & Stacy	2001



## FY2002-2003 Action Plan (Cont'd)

Obj.	What/How	Resources	Who	By When
<b>Goal 2.0 – Education and Outreach</b>				
2.1 Strategic Education & Outreach	13. Develop a multi-year education and outreach plan – priorities, costs, schedule, impacts.	Staff time	Stacy, Frank and Martin	2002
2.1, 4.1.2 Strategic Education & Outreach	14. Develop strategy for educating new Congressional members and staffers.		Frank	2001-2002
2.3 Multi- Disciplinary Approach	15. Promote a multi-disciplinary approach to public response to protection of life and property through partnerships.	Attending conferences	Max	Ongoing
2.3.6 Marine Community	16. Increase visibility at boat shows. Develop brochure and display.	Funds; coordinate with OS and MPC	Chris	2002
2.4 Publications	17. Digitize technical memoranda, reports and other publications on the web. a. Explore student internship (e.g., through Minority Servicing Institutions)		Todd, Colin and Vivian	2001-2002

## FY2002-2003 Action Plan (Cont'd)

Obj.	What/How	Resources	Who	By When
<b>Goal 3.0 – Science and Technology</b>				
3.1, 4.6.1 Participate Research Community	18. Maximize and prioritize participation in AMS, IHC, USWRP and other conferences: Formulate schedule and assignments.	TBD	Ed and branch chiefs	2002-03
3.2 Guide Researchers	19. Host a research forum at TPC.		Richard/Ed	2002
3.3.3 Hurricane Test Bed	20. Hurricane Testbed a. Administration b. Test and evaluation c. IT issues	a-b. 10-20% FTE each c. 10% each	a. Jiing/Ed b. Hurricane Specialist c. CSG (3)	a. 2002-03 b. 2001-03 c. 2002-03
3.3.3 In-house Activities	21. Redirect applications to standard platforms.	Staff time.	Colin/TSB	2003
3.4, 4.6.2 Computing Infrastructure	22. Influence the NCEP IT Plan to maximize TPC capabilities: Assess, cost out and implement computer staff training.	TBD	Jiing	Ongoing: 2001-02
3.5 Platforms	23. With NDBC and OS pursue additional marine obs.	\$\$	Chris	2001-2002
3.6 Numerical Guidance	24. Ensure continuation of GFDL numerical model development and maintenance.		Richard	2001-2002

## 2002-2003 Action Plan (Cont'd)

Obj.	What/How	Resources	Who	By When
<b>Goal 4.0 – TPC Organization and Culture</b>				
4.1.1 Customer Program Advocacy	25. Pursue increased interest in insurance industry.		Max	2001-2002
	26. Conduct “blue sky” brainstorming session on incentives/interests of private sector to finance TPC customer desired products.		Frank	2001-2002
4.1.2 Benefits of TPC Products	27. Build product-benefits summary into brochure.		Frank	2001-2002
4.2 Quality and Timeliness	28. Hold staff brainstorming session for ideas and inputs.		Mgmt/Union	2001
4.4 Staff Augmentation	29. Identify unmet needs for students and volunteers.		Mgrs to Vivian	2001-2002
4.5 Use of Staff	30. One-on-one dialog with staff regarding: a. How they view being best utilized. (Link to 4.4) b. Training needs.		Managers	2001
4.6 Training and Development	31. Coordinate the development of a multiyear training plan for TPC.	TBD	SOO & Mgrs	2002

## 2002-2003 Action Plan (Cont'd)

Obj.	What/How	Resources	Who	By When
<b>Goal 4.0 – TPC Organization and Culture (Continued)</b>				
4.7.1 Public Interaction	32. Develop a protocol for visitor and public interaction. a. Address media, telephone, etc. b. Draft and disseminate guidelines.		Frank and Managers	2002
4.7.2 Perf. Mgmt	33. Review and implement performance procedures: Standardize and coordinate implementation.  34. Schedule training event – stress management and dealing with difficult people for all employees.		Managers  Vivian to Sandra Crowe	2001  2001-2002
4.7.4 Rewards & Recognition	35. Increase open recognition.  36. Create an employee group to recommend recognition program to management. (Involve all employees – Also survey for intranet needs)		Max and Ed  Dan and Fiona	  2001
4.7.5 Strategic Plan Mgmt	37. Merge one-year actions with current efforts. a. Reprioritize and reality check workload. b. Manage monthly status.		Ed and Branch Chiefs	2001-2002

## 2002-2003 Action Plan (Cont'd)

Obj.	What/How	Resources	Who	By When
<b>Goal 4.0 – TPC Organization and Culture (Continued)</b>				
4.8.1 Meetings	38. Institute All Hands Meetings – 1 hour. a. Set standard day/time. b. Identify Topic areas; include rumor mill. c. Post minutes/highlights on intranet.		Max and Ed	Monthly
4.8.2 Intranet	39. Maintain and enhance intranet.		Frank, Chris Sisko, Hugh, James	Ongoing
3.3, 3.4, 4.3, 4.5	40. Coordinate student and volunteer projects. a. Identify staff coordinator b. Develop list of projects and staff mentors		Management	Nov. 2001
1.1.3, 1.2.2	41. Develop and enhanced tropical cyclone forecast verification scheme. a. Designate developer b. Develop software		Jiing TSB	2001 Dec. 2002

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