Following is the Executive Summary of Northrop Grumman Corporation’s 2008 Corporate Social Responsibility Report. Click on each section heading to link to the full report or view individual sections.

To access an electronic version visit: www.northropgrumman.com/corporate-responsibility, or to request printed copies, please email: corporate.responsibility@ngc.com or write to:
Community Relations Department · Northrop Grumman Corporation · 1840 Century Park East · Los Angeles, CA 90067-2199
2008 Corporate Social Responsibility Report

Executive Summary
This edition of the Northrop Grumman Corporate Social Responsibility Report documents our environmental and social performance for calendar year 2008 and demonstrates our ongoing commitment to open, voluntary and transparent disclosure. Along with a company profile, the report covers five major areas: Ethics and Governance, People, Supply Chain Management, Community, and Environmental, Health and Safety Stewardship.

For reporting standards, Northrop Grumman follows a template developed by the Global Reporting Initiative (GRI), an independent, third-party organization.

Letter from the Executive Office
The year 2008 brought unparalleled change, challenges and uncertainty to our nation and the world, and reinforced our resolve to hold fast to our strong values and corporate responsibility for all our stakeholders, inside and outside the company.

As we face unprecedented business challenges in 2009 and beyond, we remain committed to strengthening our position as a responsible global citizen, applying our creativity, integrity and innovation not only to our business, but also to solving problems in our communities and improving the environment.

We invite you to visit our new Corporate Responsibility website where you can access an electronic version of this report and read regular updates on our community, social and environmental efforts:


As always, we welcome your feedback.
Our Company

Northrop Grumman Corporation is a leading global security company whose 120,000 employees provide innovative systems, products and solutions, and technical services to government and commercial customers worldwide. The company had $33.9 billion in sales for 2008. The five Northrop Grumman operating sectors are: Aerospace Systems, Electronic Systems, Information Systems, Shipbuilding and Technical Services.

Our Ethics & Governance

At Northrop Grumman, integrity is at the heart of everything we do. Our guiding principles of corporate governance go hand-in-hand with our values in partnership with employees, customers, suppliers, shareholders and the community. Our commitment to ethics ensures that integrity, fostering long-term success and representing the interests of our shareholders are at the center of all we do.

Highlights

OpenLine (1-800-247-4952)
The Corporate Office of Ethics and Business Conduct maintains a nationwide, toll-free phone number for anyone seeking guidance on ethics and business conduct, and for reporting suspected violations. The OpenLine received more than 3,300 contacts in 2008.

Ethics & Compliance Investigations
We investigated 628 of the OpenLine contacts. As a result of these investigations, the company took various disciplinary actions, up to and including termination, against 30 employees for ethics and business conduct violations. These results only reflect matters that were received via the OpenLine process.

Board of Directors
The Northrop Grumman Board of Directors is responsible for corporate governance and oversight. In 2008, there were changes to the board membership and structure, which included the appointment of three new members and the renaming of some board committees.
People

Respect. Dignity. Integrity. At Northrop Grumman, we begin with those key values in creating openness, collaboration and trust in our work relationships. Our commitment is to create a working environment where we foster inclusion, value diversity and leverage innovation. Through strong leadership, our goal is to be the employer of choice in our industry. We envision a workplace where individuals can develop, do their best work and fulfill their potential.

Highlights

Harnessing Talent
Across the corporation, Employee Resource Groups (ERGs) refined their missions and played an active role in recruiting, attracting and retaining employees, offering professional development programs and engaging in local community relations.

Diversity
By the end of 2008, Northrop Grumman achieved a workforce comprising 26 percent women and 32 percent people of color. A new website features multiple diversity and inclusion topics at:

Supply Chain Management

Integrating values, diversity, quality and responsibility into our supply chain is key. That is a daunting task, however, with $11 billion in procurement in 2008 across a broad and diverse base of some 16,000 suppliers. To meet that challenge the supply chain management team continued to instill the charter “One Northrop Grumman” throughout the procurement organization, with the goal of establishing a single, consistent operational focus to our company’s supplier base and customers. This charter will be an ongoing focus in 2009 as we continue to implement needed infrastructure.

Highlights

Key Conference
“Raising the Bar: Achieving Excellence” was the theme of the first “Contracts, Pricing and Supply Chain” conference in October 2008 in Chantilly, Virginia. The gathering provided a forum for some 300 people to network and share best practices, institute changes for better business process efficiencies, and define strategies.

Socio-Economic Business Programs Strategy Council
In 2008, Northrop Grumman established the Socio-Economic Business Programs (SEBP) Strategy Council. The purpose of this council: provide a forum for issues related to implementing the SEBP in accordance with government regulations.

Evaluating Major Suppliers
The largest and most critical suppliers to Northrop Grumman undergo a semiannual evaluation based on their total business base with the corporation. For 2008, we evaluated 139 subcontracts awarded to the top 10 subcontractors. The results confirmed that 88 percent of the rated subcontracts were meeting or exceeding performance requirements. For those suppliers with lagging performance, we initiated an enterprise-to-enterprise engagement and review process to correct problems and help implement joint improvement initiatives.
Community

The power of one, multiplied by many, equals the potential of an entire community. Throughout our heritage of innovation, Northrop Grumman has always been a company driven by values. Going forward, we embrace the responsibility of unifying our employees toward common goals, including our collective commitment to the communities in which we operate. We believe in volunteer service and collaboration, in giving back. We believe in building partnerships for stronger communities. We believe in creating a better world.

Highlights

How We Give
In 2008, Northrop Grumman Corporation contributed $18.8 million in total philanthropic donations through the company’s Contributions Giving Program. In keeping with our companywide mission to improve learning, we directed an additional $5.8 million to the Northrop Grumman Foundation to support K-12 and post-secondary education activities, for a total of $24.6 million.

Employee Giving
Additionally, Northrop Grumman’s 120,000 employees personally gave more than $8 million in 2008 through vehicles such as United Way, gifts to education, the separate nonprofit Employees Charitable Organization (ECHO), holiday giving programs and employee volunteerism.

Boosting Education
In 2008, Northrop Grumman continued an ongoing commitment to reverse the national trend of declining student interest in science, technology, engineering and math. To that end, the company sponsored a multitude of community events and programs nationwide to support students, teachers, provide scholarships and create educational partnerships.

Supporting Troops
In 2008, as part of the company’s more focused support of active military and veterans, we instituted a new approach to such support. Additionally, from 2003 through 2008, Northrop Grumman employee giving has raised $379,000 for USO care packages including $68,000 in 2008.
Environmental, Health and Safety Stewardship

At Northrop Grumman, sustainability lies at the core of our quest for success. This ongoing commitment drives us to reduce our environmental footprint while ensuring the health and safety of our employees, customers and visitors, and the people living near our facilities. To earn this trust, meet or exceed all applicable legal requirements and increase our competitive advantage, we strive to incorporate these environmental, health and safety practices into our everyday work patterns.

Highlights

Improving Sustainability
In 2008, we created three teams to advance Northrop Grumman’s commitment to environmental performance and sustainability both internally and externally:

1) Earth Environmental Integration Group
2) Green Opportunities Group
3) A cross-department internal team including Environmental, Health & Safety (EHS), Communications, Corporate Responsibility, Procurement and Real Estate/Facilities, and others.

Greenhouse Gas (GHG) Inventory Project
To reduce the carbon footprint created by Northrop Grumman operations, and in anticipation of upcoming new regulations, the EHS Leadership Council championed an initiative in 2008 to develop a way to accurately quantify companywide greenhouse gas emissions.

Worker Safety Excellence Award
In 2008, Northrop Grumman won two prestigious Aerospace Industries Association (AIA) Worker Safety Excellence Awards for “Lowest Injury and Illness Rate” in both the “Aircraft Manufacturing” and the “Aerospace Components” sector categories based on 2007 incident rates. Integrated Systems and Electronics Systems, respectively, were the Northrop Grumman sectors that received the awards.
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For reporting standards, Northrop Grumman follows a template developed by the Global Reporting Initiative (GRI), an independent, third-party organization with the vision that corporate reporting on environmental and social performance will become part of our standard report system within the company. To learn more about the GRI, visit www.globalreporting.org.

At the beginning of 2009, Northrop Grumman reorganized the Integrated Systems and Space Technology sectors into the Aerospace Systems sector, and combined the Mission Systems and Information Technology sectors into the Information Systems sector. Because this report addresses 2008 performance, the text may reference former sector names.
Our Vision

Our Vision is to be the most trusted provider of systems and technologies that ensure the security and freedom of our nation and its allies. As a technology leader, we will define the future of defense, from undersea to outer space, and in cyberspace. We will:

1. Conduct ourselves with integrity and live our company values.
2. Deliver superior program performance.
3. Foster an internal environment of innovation, collaboration and trust.

In so doing, Northrop Grumman will become our customers’ partner of choice, our industry’s employer of choice, and our shareholders’ investment of choice.

Our Values

We, the women and men of NORTHROP GRUMMAN, are guided by the following Values. They describe our company as we want it to be. We want our decisions and actions to demonstrate these Values. We believe that putting our Values into practice creates long-term benefits for shareholders, customers, employees, suppliers and the communities we serve.

We take responsibility for QUALITY... Our products and services will be “best-in-class” in terms of value received for dollars paid. We will deliver excellence, strive for continuous improvement and respond vigorously to change. Each of us is responsible for the quality of whatever we do.

We deliver CUSTOMER SATISFACTION... We are dedicated to satisfying our customers. We believe in respecting our customers, listening to their requests and understanding their expectations. We strive to exceed their expectations in affordability, quality and on-time delivery.

We provide LEADERSHIP as a company and as individuals... Northrop Grumman’s leadership is founded on talented employees effectively applying advanced technology, innovative manufacturing and sound business management. We add more value at lower cost with faster response. We each lead through our competence, creativity and teamwork.

We act with INTEGRITY in all we do... We are each personally accountable for the highest standards of behavior, including honesty and fairness in all aspects of our work. We fulfill our commitments as responsible citizens and employees. We consistently treat customers and company resources with the respect they deserve.

We value Northrop Grumman PEOPLE... We treat one another with respect, and take pride in the significant contributions that come from the diversity of individuals and ideas. Our continued success requires us to provide the education and development needed to help our people grow. We are committed to openness and trust in all relationships.

We regard our SUPPLIERS as essential team members... We owe our suppliers the same type of respect we show to our customers. Our suppliers deserve fair and equitable treatment, clear agreements and honest feedback on performance. We consider our suppliers’ needs in conducting all aspects of our business.
About This Report

Our Five Key Behaviors

1. Live the Company Values
The company values are listed on every employee’s badge – Quality, Customer Satisfaction, Leadership, Integrity, People and Suppliers. Integrity must characterize everything we do. We want everyone who comes in contact with us to know that we do things the right way at Northrop Grumman. We don’t take shortcuts.

2. Focus on Operating Excellence
Northrop Grumman is very well-positioned strategically. We must focus on program performance to deliver on the full operating and financial potential of our company.

3. Act with Speed
Northrop Grumman is a much larger company today than we were in years past. With this increased size comes the challenge of operating in a timely fashion. We must avoid bureaucratic delays. We must be agile enough to act faster than our competitors. This “small company” behavior has characterized Northrop Grumman all along, and is an approach we must continue.

4. Communicate Openly
We want good news to travel fast, and bad news to travel even faster, up the line. We need to be mindful of the importance of honestly communicating problems as well as breakthroughs. The sooner we communicate a problem, the easier it is for us to marshal our company’s resources to solve it.

5. Collaborate across the Company
Northrop Grumman’s power comes from the talented people who make up our company. By cooperating and sharing our knowledge with each other seamlessly across sectors, we can make our company even stronger.

Letter from the Executive Office

Our vision at Northrop Grumman is to be the most trusted provider of systems and technologies that ensure the security and freedom of our nation and its allies. We want to be our customers’ partner of choice, our industry’s employer of choice, and our shareholders’ investment of choice.

A key element in achieving our vision is maintaining a constant focus on our core company values. We believe that strong values provide the foundation for sound and ethical decisions, actions and operating principles, creating positive benefits within our company as well as in local communities and larger environments where we work and live. In this spirit, we are pleased to introduce our newest Corporate Social Responsibility Report, summarizing our corporation’s environmental and social performance for 2008.

The year 2008 brought unparalleled change, challenges and uncertainty to our nation and the world, and reinforced our resolve to hold fast to our strong values and corporate responsibility for all our stakeholders, inside and outside the company. As we face unprecedented business challenges in 2009 and beyond, we remain committed to strengthening our position as a responsible global citizen, applying our creativity, integrity and innovation not only to our business, but also to solving problems in our communities and improving the environment.

In 2008, we developed a Corporate Responsibility website highlighting our principles and ongoing efforts for all the areas we cover in this report. We invite you to visit the site at: www.northropgrumman.com/corporate-responsibility/index.html, where you can access an electronic version of this report and read regular updates on our community, social and environmental efforts. As always, we welcome your feedback.

Ronald D. Sugar
Chairman and Chief Executive Officer
Northrop Grumman Corporation

Wesley G. Bush
President and Chief Operating Officer
Northrop Grumman Corporation
Northrop Grumman offers an extraordinary portfolio of capabilities that enable us to deliver innovative systems for applications that range from undersea to outer space and into cyberspace.

As a leading global security company, we apply our core competencies and advanced technologies to address the diverse and complex issues facing our customers, including the defense of our nation and its allies, environmental and climate change, cybersecurity and homeland security. The company’s broad base of capabilities also allows us to expand the frontiers of space science and develop large-scale civil information systems that enhance city, county and state government services.

Northrop Grumman has in place several integrated initiatives to help achieve our business goals, including a people strategy aimed at building the best workforce and the best workplace and attracting the best talent available for long and productive careers. The company’s green strategy strives to provide a safe and healthy workplace and ensure that business activities are conducted in an environmentally responsible manner—preserving natural resources and minimizing adverse impacts on the environment.

Welcome to our company and to this edition of our Corporate Social Responsibility Report.

Our Sectors & Products
Northrop Grumman Corporation is a leading global security company whose 120,000 employees provide innovative systems, products and solutions, and technical services to government and commercial customers worldwide. The company had $33.9 billion in sales for 2008. The five Northrop Grumman operating sectors are: Aerospace Systems, Electronic Systems, Information Systems, Shipbuilding and Technical Services.
Some Organizational Highlights from 2008:

April 2008
Completed the sale of the Electro-Optical Systems business, a producer of night vision and applied optics products, to L-3 Communications.

October 2008
Completed the acquisition of 3001 International, Inc. (now part of the company’s Information Systems sector), which provides geospatial data production and analysis, including airborne imaging, surveying, mapping and geographic information systems for domestic and international government intelligence, defense and civilian customers.

By the Numbers 2008  ($ in millions except per share)

<table>
<thead>
<tr>
<th>Category</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales</td>
<td>$33,887</td>
</tr>
<tr>
<td>Operating Income (Loss)*</td>
<td>$(111)</td>
</tr>
<tr>
<td>Earnings (Loss) from Continuing Operations*</td>
<td>$(1,281)</td>
</tr>
<tr>
<td>Net Earnings (Loss)*</td>
<td>$(1,262)</td>
</tr>
<tr>
<td>Cash provided from Continuing Operations</td>
<td>$3,208</td>
</tr>
<tr>
<td>Earnings (Loss) Per Share from Continuing Operations - Basic*</td>
<td>$(3.83)</td>
</tr>
<tr>
<td>Weighted Average Common Shares Outstanding</td>
<td>334.5</td>
</tr>
<tr>
<td>Diluted Earnings (Loss) Per Share from Continuing Operations*</td>
<td>$(3.83)</td>
</tr>
<tr>
<td>Weighted Average Diluted Shares Outstanding</td>
<td>334.5</td>
</tr>
</tbody>
</table>

*The losses in operating income, earnings from continuing operations, net earnings and earnings per share were driven by a non-cash, after-tax charge of $3.1 billion for impairment of goodwill in accordance with Statement of Financial Accounting Standards (SFAS) 142 “Goodwill and Other Intangible Assets.”

To streamline organizational structure, strengthen alignment with customers and improve the company’s program performance and growth potential, we reduced the number of sectors from eight to five between January 2008 and January 2009. The five Northrop Grumman sectors are now: Aerospace Systems, Electronic Systems, Information Systems, Shipbuilding and Technical Services.

Aerospace Systems
Provides manned and unmanned aircraft, space systems, missile systems and advanced technologies critical to our nation’s security.

Electronic Systems
Provides airborne radar, navigation systems, electronic countermeasures, precision weapons, airspace management systems, space payloads, marine and naval systems, communications systems and government systems.

Information Systems
Provides advanced solutions for defense, intelligence, civil agency and commercial customers.

Shipbuilding
The world’s leading military shipbuilder, the nation’s sole industrial designer and builder of nuclear-powered aircraft carriers, one of only two companies that design and build nuclear-powered submarines, and a leading provider and life-cycle supporter of major surface ships.

Technical Services
Provides life-cycle solutions and long-term technical services for customers globally. Key capabilities include systems support, training and simulation, and life-cycle optimization and engineering.
Awards & Recognition

BusinessWeek magazine,
“Top 50 Internships”
number 20.

BusinessWeek magazine,
“Top Places to Launch a Career”
number 23.

“Capability Maturity Model Integration Level 5” (CMMI) awards,
a total of 38 for commercial and defense industry best practices for software
(the most by any company in defense and information technology).

Defense News,
“Top 100 Defense Companies”
number 4 (globally), based on defense revenue.

Government Executive magazine,
“Top 200 Federal Contractors”
number 3, based on procurement data.

Minority Engineer magazine,
“Top 50 Employers for Minority Engineers”
number 16.

Space News,
“Top 50 Space Industry Manufacturing and Services”
number 3, based on industry sales.

U. S. Department of Labor,
“New Freedom Initiative Award”
for efforts in hiring disabled veterans.

Washington Technology magazine,
“Top 100 Federal Prime IT Contractors”
number 3, based on IT revenue.

Women Engineer magazine,
“Top 50 Employers for Women Engineers”
number 6.
At Northrop Grumman, ethics are the foundation of our success. Our guiding principles of corporate governance go hand-in-hand with our values in partnership with employees, customers, suppliers, shareholders and the community. Our commitment to ethics ensures that integrity, fostering long-term success and representing the interests of our shareholders are at the center of all we do.

2008 Program Highlights

OpenLine
1-800-247-4952

The Corporate Office of Ethics and Business Conduct maintains a nationwide, toll-free phone number for anyone seeking guidance on ethics and business conduct, and for reporting suspected violations. This line is administered by a third party and has 24/7 availability to a live service representative.

In addition, there is an online reporting system available to all who have Internet access. The companywide OpenLine received more than 3,300 contacts in 2008.

<table>
<thead>
<tr>
<th>Category</th>
<th>Total 2008 Contacts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investigations</td>
<td>628</td>
</tr>
<tr>
<td>Referrals</td>
<td>1,487</td>
</tr>
<tr>
<td>Inquiries</td>
<td>1,221</td>
</tr>
</tbody>
</table>

We investigated 628 of the OpenLine contacts. As a result of these investigations, the company took various disciplinary actions, up to and including termination, against 30 employees for ethics and business conduct violations. These results only reflect matters that were received via the OpenLine process.

The system allows the company to track OpenLine calls by total number and type of contacts, by sector, by allegations with and without merit, and by disciplinary action rendered. Reports and metrics provide trending data to determine opportunities for targeted training and communications. The results are published in the quarterly ethics newsletter.
Findings include:
Program efforts are working, though room for improvement
Nearly universal awareness of program elements
Observed misconduct lower than both defense contractor peers and national average
Reporting of ethics concerns has improved, yet still lower than defense contractor peers and national average
Fear of retaliation against reporters is an area of focus

2008 Areas of Focus

Ethics & Leadership
From our Board of Directors to leaders and each employee, ethics are everyone’s responsibility at Northrop Grumman. Our hallmark for high ethical standards goes far beyond compliance. Ethics and integrity are the fabric of our operations, with executives who lead by example and through training and communication at every level of the company. All employees have the responsibility to serve as role models and leaders for sound ethical behavior in the decisions they make and the actions they take each day on behalf of Northrop Grumman.

Principles of Corporate Governance
Our values are the guiding tenets of our ethics and governance foundation and our commitment to quality, customer satisfaction, leadership and integrity, and valuing people and suppliers.

The Northrop Grumman Board of Directors is responsible for corporate governance and oversight. In 2008, there were changes to the board membership and structure, which included the appointment of three new members and the renaming of some board committees (a full listing of 2008 Board members appears on page 20-21). Under the Company’s Principles of Corporate Governance, it is the objective of the Board of Directors that at least seventy-five percent (75%) of the Board members be “independent directors.”

The primary responsibility of the Board of Directors is to both foster the long-term success of Northrop Grumman and represent the interests of the shareholders. In accordance with this philosophy, the Board of Directors abides by the “Principles of Corporate Governance” that reinforce the company’s values. The Board of Directors annually reviews long-term strategy for each of the company’s businesses and the company as a whole. The Board of Directors also annually reviews the governance principles and seeks ways to improve and modify them based on evolving circumstances.
Standards of Business Conduct

In 1986, Northrop Grumman was an original signatory to the “Defense Industry Initiative on Business Ethics” and first published its own “Standards of Business Conduct” based on that template. Every Northrop Grumman employee receives a copy of the “Standards of Business Conduct.”

The principles outlined provide a foundation for operating each day with the highest ethical standards. These “Standards of Business Conduct” apply to everyone within the company, regardless of position or level of responsibility, and they extend to all non-employees who act on behalf of Northrop Grumman in any capacity. In short, our belief is that each person is responsible for his or her individual integrity and the consequences of all actions.

All employees receive ongoing ethics awareness training. Additionally, employees receive compliance training on selected topics through interactive video, live presentation and printed publications. Northrop Grumman also communicates the ethics message through corporate and sector websites, presentations, shared values lesson-plan kits for managers, newsletters and the integration of ethics into leadership training.

Our Reporting Structure

Each of Northrop Grumman’s business sectors, along with the Corporate Office, has a lead business conduct officer who directly reports to the corporate director of ethics and business conduct. The corporate director, in turn, reports to the vice president of corporate responsibility, who reports to the company CEO. The ethics office reports quarterly to the Audit Committee of the Board of Directors and annually to the Policy Committee of the Board of Directors.

Looking Forward: 2009 Focus

1. Continue efforts to create awareness of ethics and compliance programs, to improve the ethical culture and reduce ethics risk:
   - Build on program elements already in place
   - Use reward and evaluation systems to reinforce ethics as a priority
   - Encourage management to talk about ethics and be overt and intentional role models. Also, consider implementing targeted training or coaching
   - Institute systems to embed ethical values in business decision-making
   - Examine reasons for fear of retaliation, then create interventions
   - Further explore factors that drive negative work environments

2. Examine survey data
   - Identify groups that under- or over-perform to identify “hot spots” and best practices
   - Consider leveraging existing data for comparison
   - Investigate further through focus groups and interviews

3. There are several new regulations that require the company to ensure compliance. The new FAR Mandatory Disclosure regulations will be a major requirement for the company and will require significant communications and training going forward.

4. Conduct ethics training for all employees to include import training and other modules on compliance risk areas.

5. Continue quarterly ethics newsletter for all employees.

6. Develop a “Corporate Citizens Award” that highlights ethics.

7. Expand our OpenLine to reach Northrop Grumman employees worldwide.
Board of Directors 2008

Ronald D. Sugar  
Chairman of the Board and Chief Executive Officer  
Northrop Grumman Corporation

Lewis W. Coleman  
President and Chief Financial Officer  
DreamWorks Animation SKG

Thomas B. Fargo  
Admiral, United States Navy (Ret.)

Victor H. Fazio  
Senior Advisor  
Akin Gump Strauss Hauer & Feld LLP

Donald E. Felsinger  
Chairman and Chief Executive Officer  
Sempra Energy

Stephen E. Frank  
Former Chairman, President and Chief Executive Officer  
Southern California Edison

Phillip Frost  
Vice Chairman of the Board and Chief Executive Officer  
Opko Health, Inc.

Bruce S. Gordon  
Former President & CEO, NAACP and Retired President, Retail Markets Group  
Verizon Communications Inc.

Madeleine Kleiner  
Former Executive Vice President and General Counsel  
Hilton Hotels Corporation

Karl J. Krapek  
President and Chief Operating Officer (Ret.)  
United Technologies Corporation

Charles R. Larson  
Admiral, United States Navy (Ret.)

Richard B. Myers  
Former Chairman of the Joint Chiefs of Staff  
General, United States Air Force (Ret.)

Aulana L. Peters  
Retired Partner  
Gibson, Dunn & Crutcher

Kevin W. Sharer  
Chairman, Chief Executive Officer and President  
Amgen, Inc.
At Northrop Grumman, we begin with those key values in creating openness, collaboration and trust in our work relationships. Our commitment is to create a working environment where we foster inclusion, value diversity and leverage innovation. Through strong leadership, our goal is to be the employer of choice in our industry. We envision a workplace where individuals can develop, do their best work and fulfill their potential.

2008 Successes

1. Harnessing Talent
Across the corporation, Employee Resource Groups (ERGs) refined their missions and executed plans of action. These networking groups, in collaboration with human resources and executive sponsors, play an active role in recruiting, on-boarding and retaining employees, offer professional development programs and engage in local community relations. The various ERGs include women, African-American, Hispanic, Asian, lesbian, gay, bisexual and transgender (LGBT), generations X and Y, veterans and people with disabilities.

2. Diversity
By the end of 2008, Northrop Grumman achieved a workforce comprising 26 percent women and 32 percent people of color. Our ongoing goal is to foster a talented, diverse and inclusive workforce. To that end, more than half our college new hires in the past five years have been women and minorities.

Additionally, more than 18,500 employees attended diversity and inclusion awareness training in 2008, and approximately 450 managers and supervisors attended inclusion leadership training.
3. People Strategy
Northrop Grumman’s “People Strategy,” launched more than two years ago, helps the company build the best workforce and best workplace. The People Strategy has six major components: managing talent; developing leaders; driving performance; optimizing work-life balance; using a central Human Resources Service Center supported by common systems and human resources services; and applying a human resources operating model that couples centralized delivery of programs with sector human resources partners.

4. New Diversity & Inclusion Website

2008 Areas of Focus

Diversity—Philosophy & Commitment
At Northrop Grumman, the strong commitment to diversity and inclusion is supported by policies and procedures that foster a nondiscriminatory workplace. We incorporate Equal Employment Opportunity (EEO) and Affirmative Action (AA) principles and policies into the daily operations of the company. We actively support our disabled and veteran employees through policies and principles and, more importantly, our ongoing actions.

To communicate our policies and practices, we publish annual Affirmative Action plans. These plans document specific actions to improve the representation of minorities and women and to integrate veterans and people with disabilities. These plans also reaffirm the company’s commitment to ensure equal employment opportunities for qualified applicants and employees, without regard to race, color, religion, sex or national origin/ancestry. Further, we adhere to a policy of nondiscrimination on the basis of age, disability, veteran status, sexual orientation and gender identity.

We at Northrop Grumman, as a major government contractor, record and monitor racial/ethnic, gender and veteran representation as required by federal regulations. We are also committed to integrating people with disabilities into the Northrop Grumman workforce. Through transparency, we intend to be an employer of choice. This chart shows Northrop Grumman’s 2008 diversity representation by gender and race/ethnicity.

Diversity & Inclusion

To achieve our vision of a diverse and inclusive workplace, the company will continue to support and develop partnerships with the National Society of Black Engineers, the Society of Hispanic Professional Engineers, the Society of Women Engineers, the American Indian Science and Engineering Society, and other diversity-based professional associations.

Additionally, we will hire college graduates who reflect the diversity of college and university students nationally. And we will continue to cast a wider net to recruit talented individuals through our partnerships with leading educational institutions and associations. Further, we will develop and implement Affirmative Action plans that meet requirements of Executive Order 11246 and its implementing regulations in a changing regulatory environment.

Employee Resource Groups
Throughout 2008 we promoted, encouraged and supported Employee Resource Groups (ERGs) by publishing guidelines and providing executive sponsors as coaches. These ERGs foster workplace diversity and inclusion and help create an engaged workforce.

Flexible Work Practices
We worked to implement flexible work practices and policies to help employees optimize work-life balance through employee communications.

Dispute Resolution Process
The company is committed to creating an environment of mutual trust and professionalism where problems can be fairly resolved through an interactive process that encourages better communication at all levels.

Employee Recognition
We continue to provide company service awards to employees in recognition of their anniversary dates, in five-year increments. In 2008, 19,908 employees received recognition for their extensive service with the company, ranging from five to more than 50 years of service.
Improvement Opportunities

1. Develop more diversity in senior leadership positions and create a pipeline of talented professionals. To do so we plan to continue to work on our Organization and Leadership Review process (a talent management program) for senior management positions. Also, continue efforts with our talent acquisition programs to cast a wider net in recruitment to attract up-and-comers. Further, we will convene an enterprise Diversity & Inclusion Leadership Council to guide sectors on key goals and objectives.

2. Additionally, train the senior leadership team to become more inclusive leaders. Our plans to do so include a training module that focuses on the hidden barriers to success. These include the subtle messages, usually subconscious, that devalue, discourage and impair performance in the workplace. This training drives rapid behavior change and raises business diversity and inclusion consciousness and performance.

Looking Forward: 2009 Focus

Going forward, we will continue to drive the People Strategy to help accelerate business performance. To that end, we have created companywide teams to design and implement recommendations in each of four major areas:

1. Managing talent
2. Developing leaders
3. Driving performance
4. Optimizing work-life balance

Awards & Recognition

Northrop Grumman’s commitment to its people and its reputation as one of the best places to work garnered numerous national awards and recognition:

| G.I. Jobs, one of the top 50 military-friendly employers. |
| Fortune magazine, ranked number 3 "Most Admired" and "Global Most Admired" based on management, employee talent and investment value. |
| CNN/Fortune magazine, ranked number 10 nationwide for "Great employers for recent college graduates." |
| Women Engineer magazine, ranked number 6 nationwide for "Top 50 companies." |
| National Society of Black Engineers, ranked number 14 based on advancement opportunities and job security. |
| Diversity Business Multicultural e-Business Solutions named Northrop Grumman among the "Top 20 corporations for multicultural business opportunities." |
| Black Engineer magazine, ranked as one of the top 3 "Most admired companies for minority engineers." |
| Black Collegiate magazine, ranked number 9 "Best employer for graduating engineers." |
| Minority Engineer, ranked number 3 of 50 as an employer that provides a positive working environment for members of minority groups. |
| Working Mother magazine, recognized eight times as one of the top 100 companies for working mothers. |
| Hispanic Network magazine, ranked as one of the top 10 aerospace companies and one of the top 100 corporations providing opportunities for Hispanics. |
| Human Rights Campaign, score of 100 percent for meeting key criteria in creating a friendly work environment for GLBT employees. |
| Best Practices Resource Guide for Workforce Diversity, recognized as "Best in Class." |
| Best Places to Work in IT, ranked in the top 100 based on diversity, training, career development, benefits, hot projects and retention. |
| Los Angeles County Board of Supervisors and the Los Angeles County Child Care Advisory Board, recognized for being an exemplary family-friendly employer. |
| Society of Women Engineers, 11th Annual Golden Family Award, which honors a Chicagarea company for providing benefits and programs to support work/family balance for employees. |
Supply Chain Management

Integrating values, diversity, quality and responsibility into our supply chain is key. That is a daunting task, however, with $11 billion in procurement in 2008 across a broad and diverse base of some 16,000 suppliers. To meet that challenge the supply chain management team continued to instill the charter “One Northrop Grumman” throughout the procurement organization, with the goal of establishing a single, consistent operational focus to our company’s supplier base and customers. This charter will be an ongoing focus in 2009 as we continue to implement needed infrastructure.

2008 Successes

1. In 2008, we continued to enhance our supply chain competitive advantage by establishing the Procurement Shared Services organization under the guidance of Enterprise Shared Services. In addition to providing commodity sourcing efficiencies, the Procurement Shared Services team carries out non-production commodity requirements for the corporation. This effort will also rationalize facilities, human resources, finance and a variety of administrative functions for increased efficiency.

2. “Raising the Bar: Achieving Excellence” was the theme of the first “Contracts, Pricing and Supply Chain” conference in October 2008 in Chantilly, Virginia. The gathering provided a forum for some 300 people—employees and government customers from across the corporation’s contracts, pricing, government financial relations, and supply chain organizations—to network and share best practices, institute changes for better business process efficiencies, and define strategies.

3. Continued the internal “Procurement and Subcontracts Strategy” councils, used to implement procurement strategies and leverage the expansive Northrop Grumman supply chain. In 2008, Northrop Grumman established the Socio-Economic Business Programs (SEBP) Strategy Council. The purpose of this council: provide a forum for issues related to implementing the SEBP in accordance with government regulations.
4. Conducted four face-to-face meetings with sector supply chain vice presidents and staff in 2008. These meetings focused on aggregation opportunities and aligning common processes and procedures across the corporation. Other areas of concentration included strategic alliance initiatives, representative metrics and additional opportunities to leverage the businesses.

5. The U.S. Air Force/U.S. Navy selected Northrop Grumman to participate in and host a Commercialization Pilot Program (CPP) interchange workshop to select Small Business Innovative Research (SBIR) firms in certain technology disciplines that can be integrated into Northrop Grumman and government programs.

6. Northrop Grumman was the second prime contractor selected to participate in the CPP Initiative, a program to accelerate transition of SBIRs Phase II projects into high-priority systems. Northrop Grumman screened 22 SBIRs firms with technical potential, which resulted in the identification of nine remaining firms with high potential for integration into government programs.

2008 Areas of Focus

1. Renew focus on performance improvement through Competitive Excellence initiatives. Highlighted areas for improvement in subcontract management included leveraged spend, execution, performance metrics and talent/skill base issues. The resulting recommendation improves the probability of selecting the best-value subcontractor, staffing the subcontract with the right skill mix, leveraging existing relationships, and establishing leading risk indicators for performance management.

2. Become the “Customer of Choice” for our major suppliers and subcontractors. This priority continues to be the strong emphasis of our socioeconomic business performance across the enterprise.

3. Achieve small business performance goals in all categories.

4. Right-size the supply base for alignment with the business portfolio.

5. Align central commodity sourcing and execution strategy across the corporation to deliver the full potential of financial and process efficiencies and benefits.

6. Maintain common policies and procedures across the corporation to ensure a “One Northrop Grumman” perspective from both suppliers and customers.
Supplier Relations

Instilling Ethics

We consider every supplier to Northrop Grumman a valued team member. We cannot and will not accept poor practices from suppliers in the areas of human rights and labor, diversity, quality, occupational health and safety or the environment. Northrop Grumman Corporation was not cited or fined for any supplier issues or procurement violations in 2008.

To that end, every supplier to Northrop Grumman receives an annual letter outlining our ethics policies and code of conduct. In 2008, we sent 16,000 such letters. Additionally, we continue to reiterate the ethics theme through process controls built into our supply chain bidding, Request for Information (RFI) response schedules, and overall technical and financial evaluation processes. For example, to ensure adequate evaluations our procurement processes keep technical bid data separate from financial data.

Internally, Northrop Grumman procurement employees are required to annually review the procurement integrity policy and sign a certification specifying that they will never accept supplier gifts, bribes or kickbacks. Northrop Grumman employees are also required to identify any conflicts of interest with current and potential suppliers. Additionally, Northrop Grumman procurement employees perform due diligence in assessing whether suppliers have been debarred or suspended in any way, and whether suppliers have any ties to terrorist organizations or governments plotting against the United States of America.

Fostering Supplier Relationships

Northrop Grumman supports national diversity trade associations by sponsoring targeted outreach through the Center for Veterans Enterprise, the National Association of Women Business Owners, the National Center for American Indian Enterprise Development, the Asian Business Association, the Latin Business Association, the Black Business Association and organizations that employ blind and severely handicapped individuals. Further tenets of developing our supply chain include the following:

Annual Small Business Supplier Recognition Program

In 2008 this program recognized 40 small business suppliers that made significant contributions to the success of Northrop Grumman’s programs through their innovation and excellence in the products they provide. In addition, 42 Northrop Grumman employees across the corporation received recognition for outstanding dedication and significant contributions to the corporation’s socio-economic business programs. This annual event took place December 10, 2008, in Los Angeles, California.

Mentor-Protégé Program

Northrop Grumman provides scholarships to small firms to attend the Tuck School of Business Minority Business Executive Program at Dartmouth. The opportunity to participate in an executive-level development course equips these professionals with the tools to increase the profitability and success of their businesses. The curriculum includes developing and implementing customer-focused strategic plans and control systems while using financial tools to perform cost analyses. To date, some 12 small businesses and protégé firms have participated in this and the advanced program at the Tuck School at Dartmouth.

In 2008, Northrop Grumman:

Forged 29 Mentor-Protégé agreements and subcontracted more than $73.9 million to these Protégés (compared to $24.6 million to Protégés in 2007).

Subcontracted more than $2.8 million to historically black colleges and universities and minority institutions (HBCU/MI).

Provided $40,000 of sponsorship to four HBCU/MIIs under the NGC University Alliance Program.

Annual Mentor-Protégé Nunn-Perry Awards Reception

This annual event, initiated by Northrop Grumman, provides a unique opportunity for suppliers to interact directly with Department of Defense representatives and other prime contractors. In 2008, nine teams received the Department of Defense Nunn-Perry Award, which is the highest honor suppliers and primes can receive for participation in the Mentor-Protégé program. Since 1995, Northrop Grumman Corporation has received 18 Nunn-Perry awards.
Supply Chain Management

Evaluating Major Suppliers

The largest and most critical suppliers to Northrop Grumman undergo a semiannual evaluation based on their total business base with the corporation. The company characterizes each supplier by procurement dollars, number of business units impacted and number of programs. We at Northrop Grumman use the industry-standard Cost Performance Index, Schedule Performance Index and a variety of qualitative measures to track program performance.

For 2008, we evaluated 139 subcontracts awarded to the top 10 subcontractors. The results confirmed that 88 percent of the rated subcontracts were meeting or exceeding performance requirements. For those suppliers with lagging performance, we initiated an enterprise-to-enterprise engagement and review process to correct problems and help implement joint improvement initiatives.

Evaluating performance at this enterprise-wide level and engaging with the strategic suppliers through the “Voice of the Supplier” allows suppliers to assess Northrop Grumman as though the supplier were the customer. This reversal of relationship opens dialog and enables us to better understand issues from the perspective of suppliers.

The global financial challenges throughout 2008 have been tumultuous for all businesses whether public or private, large or small. In recognition of this, Northrop Grumman led a cross-sector, cross-functional team to assess supplier financial health and associated risk mitigation, with a particular emphasis on key and strategic subcontractors. Additionally, we sent a letter to our 16,000 suppliers requesting them to also assess each of their supply chains for critical risks and risk mitigation.

Tracking Progress

We maintain trend data on small business subcontracting performance by small business category. We also submit biannual small business performance metrics to internal and external customers. Internally, we document the following metrics:

- Number of active Mentor-Protégé agreements.
- Dollars subcontracted to Protégé companies.
- Dollars subcontracted to historically black colleges and universities/minority institutions (HBCU/MI).
- Savings resulting from our enterprise agreements (commodities aggregated across the corporation).
- Compliance with enterprise agreements.
- Supplier rationalization (current supply base count).

Northrop Grumman currently conducts Mentor-Protégé programs with:

- Department of Defense
- Department of Homeland Security
- National Aeronautics & Space Administration
- Federal Aviation Administration
- Missile Defense Agency
- National Geospatial-Intelligence Agency
- Centers for Disease Control
- State of Texas

### Percentage of Procurement Dollars

<table>
<thead>
<tr>
<th>Category</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Large Businesses</td>
<td>64.3%</td>
</tr>
<tr>
<td>Small Businesses</td>
<td>35.7%</td>
</tr>
<tr>
<td>Woman-owned Business</td>
<td>6.1%</td>
</tr>
<tr>
<td>Veteran-owned Business</td>
<td>4.9%</td>
</tr>
<tr>
<td>Minority-owned Business</td>
<td>4.1%</td>
</tr>
<tr>
<td>Certified HUBZone Companies</td>
<td>2.5%</td>
</tr>
</tbody>
</table>
How We Performed

Our supplier rationalization, or total supplier count, hit 16,981 against a target of 16,250. This is a significant reduction compared to a 2007 count of 19,500 suppliers. Across sectors within the corporation, compliance with enterprise commodity agreements was greater than 90 percent.

Improvement Opportunities

1. In 2008, four of seven Northrop Grumman business units achieved the 3 percent statutory goal for HUBZone small business subcontracting. Two other business units showed positive trends toward the same goal. Additionally, total subcontracting with Service-Disabled Veterans remained consistent across the enterprise. These achievements are the direct result of actions taken in support of our five-year improvement plan, started in 2005, to move toward achieving the Service-Disabled Veteran and HUBZone small business goals.

2. As stated in the 2007 edition of this report, communication and aligning processes are always a challenge in a large business spread across multiple sectors. We continue to work on establishing consistent acceptance and assimilation of supplier base goals throughout the corporation.

3. Northrop Grumman continues to aggressively pursue targeted outreach that is commodity- and small business category-specific. We are also collaborating with Business Development and the technical communities to identify small business opportunities in the pre-proposal phase and earlier in the program cycle. We have developed a series of corporate initiatives to promote a positive trend in our subcontracting performance. This includes outreach to all small business categories as well as participation in the Small Business Innovative Research program and the Mentor-Protégé program.

Looking Forward: 2009 Focus

1. Evaluate possible new Mentor-Protégé agreements and review all current Protégé companies for inclusion on upcoming enterprise agreement opportunities. Enhancing and mentoring future sourcing and procurement leaders, both external and within Northrop Grumman, will continue to be a key focus.

2. Maintain and improve the company policy and management structural changes. Supply chain changes will continue to evolve as Northrop Grumman transitions to a shared service model for nonproduction procurement services to enhance shareholder value. We will continue to develop the processes across the corporation for monitoring supply chain health and minimizing risks.

3. Promote “One Northrop Grumman” to internal procurement organizations and suppliers. Achieving compliance and savings goals will be a key challenge. This includes developing strategic process and technology road maps for future integration of systems and system data that are currently disparate.

4. Increase historically black colleges and university/minority institutions (HBCU/MI) subcontracting as a corporate initiative. HBCU/MIs are participating in Small Business Technology Transfer Research and Mentor-Protégé programs. In addition, Northrop Grumman is a member of the Consortium for Small Business/Historically Black Colleges & Universities Integration program. The consortium consists of prime contractors working with government agencies to increase HBCU/MI participation in federal contracting and establish a database with current HBCU/MI points of contact for school disciplines.

5. Monitor progress on the Service-Disabled Veteran and HUBZone small business initiative and provide assistance to ensure continuous improvement in subcontracting performance.

6. Integrate the Small Business Innovative Research (SBIR) program as a tool in identifying new technologies for procurement and integration into government programs at Northrop Grumman. Currently, Northrop Grumman is tracking and supporting 74 SBIR technical topic areas that are supported by the Corporate Technology Council.
7. Continue to rationalize our supplier base according to Northrop Grumman program portfolios.

8. Improve subcontract management with implementation of Competitive Excellence Initiative recommendations. Additionally, we will improve our relationship management process for engaging our key subcontractors. Another major initiative: leveraging the Northrop Grumman Non-Advocate Review (NAR) process for new business initiatives by deploying the Subcontract Management Team approach.

9. In 2008, a Financial Process Excellence (Six Sigma) effort concentrated on defining published corporate procedure on preferred procurement and payment processes. Support included the Supply Chain Leadership Council, the Procurement Strategy Council and the Controllers Council. A draft corporate procedure has been approved.

Awards & Recognition

Northrop Grumman received 10 national recognition awards in 2008 for its outstanding SEBP program, including:

- Department of Defense, Nunn-Perry Award for outstanding Mentor-Protégé Program Performance. The Department of Defense has recognized a major milestone for Northrop Grumman: 18 Nunn-Perry Awards, which is the most received by any company since the inception of these awards.


- U.S. Department of Commerce, “Corporate Citizen” award.

- U.S. Department of Justice, award to the Electronic Systems Sector Supply Chain Management Strategic Sourcing team for exceeding subcontracting goals in two categories: working with small and woman-owned businesses.

- U.S. Department of Veterans Affairs, “Corporate Achievement” award.

- U.S. Small Business Administration, “Frances Perkins Vanguard Award” for woman-owned small business advocacy.

- White House Initiative, recognition award for efforts with Historically Black Colleges & Universities.
The power of one, multiplied by many, equals the potential of an entire community. Throughout our heritage of innovation, Northrop Grumman has always been a company driven by values. Going forward, we embrace the responsibility of unifying our employees toward common goals, including our collective commitment to the communities in which we operate. We believe in volunteer service and collaboration, in giving back. We believe in building partnerships for stronger communities. We believe in creating a better world.

2008 Successes

An Expanded Giving Model

As a technology-driven company, our primary community focus is improving the quality of education from the early grades all the way through the university level. In 2008, we strategically focused corporate contributions to support both education and other important community areas, including environmental stewardship, health and human services, and military and veteran support. To that end, our targeted giving percentages were:

- 50% Education, with a major emphasis on science, technology, engineering and math (STEM)
- 20% Veterans and military
- 20% Health and human services
- 5% Environment
- 5% Other

We use a contributions management system to identify each contribution and determine percentages.
Improving Synergy & Communication

In 2008, we successfully implemented both a contributions management system and an employee volunteer management system companywide. We are using both to track contributions and to manage and report employee volunteer program information. The contributions management system provides nonprofit agencies the capability to apply for funding and report contributions online. This reduces redundancies and provides increased internal visibility within Northrop Grumman for requests for support.

The volunteer management system gives employees visibility to community volunteer opportunities in their local areas and allows them to sign up for events and log their volunteer hours. From April through December 2008 the new user report showed 3,756 participants.

We also enhanced communication with selected external stakeholders via a “Letter to Opinion Leaders” that shared company and employee community initiatives and community involvement activities. Further, a new Corporate Responsibility website now includes detailed information in all the areas covered in this report as well as overall corporate citizenship.

Company & Employee Community Gifts

In 2008, Northrop Grumman Corporation contributed $18.8 million in total philanthropic donations through the company’s Contributions Giving Program. In keeping with our companywide mission to improve learning, we directed an additional $5.8 million to the Northrop Grumman Foundation to support K-12 and post-secondary education activities, for a total of $24.6 million.

Further, Northrop Grumman’s 120,000 employees generously supported a multitude of nonprofits through in-kind giving such as back-to-school supply drives and clothing drives.

Additionally, these same employees personally gave more than $8 million in 2008 through vehicles such as United Way, gifts to education, the separate nonprofit Employees Charitable Organization (ECHO), holiday giving programs and employee volunteerism, as detailed here:

<table>
<thead>
<tr>
<th>Category</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>United Way employee contributions</td>
<td>$4.5 million</td>
</tr>
<tr>
<td>Gifts to education</td>
<td>$1.7 million</td>
</tr>
<tr>
<td>Employees Charitable Organization (ECHO), a 501(c)(3) nonprofit</td>
<td>$1.2 million</td>
</tr>
<tr>
<td>Holiday Giving Program employee contributions</td>
<td>$283,106</td>
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<tr>
<td>Disaster relief</td>
<td>$63,496</td>
</tr>
<tr>
<td>U.S. military troop support</td>
<td>$150,151</td>
</tr>
</tbody>
</table>
2008 Areas of Focus

1. Boosting Education

Simply stated, we at Northrop Grumman are committed to doing our part to reverse the national trend of declining student interest in science, technology, engineering and math. Nowhere is this commitment more evident than in the multitude of community events and programs we are sponsoring nation-wide. Whether programs support students and teachers, or provide scholarships or partnerships, Northrop Grumman employees are working hard to improve science and math curricula.

Turning around an educational trend is a difficult, far-reaching and complex task. However, we are beginning to see increased interest and enthusiasm from both students and teachers across the country. Our efforts, it seems, are paying off. To achieve such gains, we implemented the following programs company wide in 2008:

Fostering Learning

Per ongoing tradition, Northrop Grumman endorsed and supported several national partnerships, including National Engineers Week 2008; National Action Council for Minorities in Engineering (NACME); National Conference on Aviation and Space Education; National Science Foundation Extraordinary Women in Engineering Coalition; National Youth Science Foundation, Sally Ride Science, Science Buddies, Smithsonian Heritage Family Days, Project "Lead the Way"; Cyberchase television show; and Teach for America, to name a few.

Supporting Scholarships

The Northrop Grumman Foundation continues to embrace programs that build a diverse employee pipeline. In 2008, the foundation funded some 25 scholarships (totaling $100,000) to various organizations including: American Indian Science and Engineering Society, the National Society of Black Engineers, the Society of Hispanic Professional Engineers, the Society of Women Engineers and others.

Breaking Boundaries for Girls

In the spirit of broadening possibilities for girls and women, the Northrop Grumman Foundation has been a national sponsor of the Sally Ride Science Festivals since 2003. This organization focuses on empowering young girls to consider careers in science, engineering and mathematics.

In 2008, the Northrop Grumman Foundation and company volunteers from across the country supported festivals in Dallas, Texas; Baltimore, Maryland; Colorado Springs, Colorado; Los Angeles, California; and San Diego, California. Through these festivals, the message of new possibilities reached more than 2,500 students, 250 teachers and 500 parents.

Inspiring Middle Schoolers

The TOY Challenge, also a Sally Ride Science program, is a national toy and game design competition for fifth- to eighth-graders where imaginative teams of kids get to create a new toy or game. This is a great opportunity to inspire young people to develop through learning, see the value in teamwork and connect middle school students to math, science and engineering.

Strengthening Math & Science Teaching

In 2008, we reviewed programs supported by various company elements at the middle school and high school levels and also those that supported teachers. We then took the program components that were considered best practices and combined them to form one program targeted to each of these three areas.
Partnering with Middle Schools: NG4U

Northrop Grumman engineers and scientists volunteered to tutor students at various partner schools as part of a middle school program called “NG4U” (Northrop Grumman for You). A toolkit was developed for their use in the classroom, which we call “Engineering in a Box,” and it will be rolled out during National Engineers Week 2009 as a resource for the volunteer employees to tap during classroom visits. In addition, an engineering and technical careers showcase will be held once a year at various company facilities to discuss the many job possibilities available to middle school students, teachers and parents.

Reaching High Schools

Through a mentoring, project-based program, Northrop Grumman volunteers are also working with high school students. These efforts combine the previous HIP (High School Involvement Partnership) and WORTHY (Worthwhile to Help High School Youth) programs into a cohesive umbrella program that includes student internships, graduation incentives, a summer enrichment program and potential scholarships. We anticipate 150 to 170 student participants.

The TEAACH Program

In 2008, we expanded the TEAACH program (Teachers and Engineers for Academic Achievement), which was supported by one of Northrop Grumman’s business sectors, into a companywide teacher support program. This program will focus on support for middle school math, science and technology educators. It will provide teachers with assistance in integrating engineering concepts into lessons as well as hands-on job shadowing, and will acquaint them with various engineering disciplines during four-day sessions in the summer. The educators will also receive a stipend and, additionally, “parental” and “college coach” components will be added in 2009.

Additional Teacher Support

Earthwatch Partnership Launched

In October 2008, we debuted the Northrop Grumman Foundation Earthwatch Educator program, an innovative environmental education program for teachers, at the 2008 National Conference on Aviation and Space Education. The company was one of the sponsors of the conference “Today’s Students: Tomorrow’s Aerospace Workforce” in Arlington, Virginia. In partnership with the Earthwatch Institute, the Northrop Grumman Foundation offered educators across the country the opportunity to participate in 2009 expeditions focused on climate change and oceans preservation.

Boosting National Teaching Standards

In 2007, Northrop Grumman and the National Board for Professional Teaching Standards initiated a partnership to help mathematics and science teachers in underprivileged schools strengthen their skills and make a lasting impact on their students. The unique initiative is designed to increase the number of National Board Certified Teachers in targeted regions throughout the country by providing financial support for teachers interested in pursuing National Board Certification.

In October 2008, Northrop Grumman executives made a three-year commitment of $150,000 to support scholarships for math and science candidates through the Professional Teaching Development Centers in California. These regional centers will help the National Board for Professional Teaching Standards meet its goal to increase equity and access to National Board Certification, especially for teachers at low-performing schools.

Northrop Grumman Weightless Flights of Discovery

For the third consecutive year, in 2008 Northrop Grumman continued its initial and now ongoing sponsorship of “Weightless Flights of Discovery.” The program provides professional development for middle school teachers across the United States who in turn return to the classroom and spark student interest in mathematics and science. The teacher training includes workshops and actual weightless flights like those used to train astronauts for space exploration. During flight segments of the program, teachers conduct microgravity demonstrations that apply science, technology, engineering and mathematics principles to human activities in a space environment.
Participating teachers receive evaluations and encouragement to open a dialogue with Northrop Grumman engineers. The findings from teacher evaluations in 2006 and 2007 demonstrate that teachers are gaining inspiration and motivation to improve and enhance their teaching methods. According to an online poll of 205 participating teachers, the initiative is meeting its goals in driving student interest in STEM education. To date, almost 1,000 teachers from 20 states have gone weightless and returned to their classrooms to relay the experience.

Indeed, in the survey 91.9% of the teachers reported a notable increase in their students’ overall interest in science. Additionally, 74.6% reported an increased number of students expressing a desire to continue to study science and math in high school and/or college, with 77.8% of teachers reporting a rise in the number of students who have expressed a desire to pursue a career in a STEM-related field, which is a key goal of the Northrop Grumman Foundation program.

Nearly two-thirds of teachers (60.7%) also reported more of their students are participating in science clubs and other related extra-curricular activities. Participants also reported a turnaround in the number of notably disengaged students. According to 83.5% of the teachers, students who were previously uninterested in science and math have shown a new, marked interest as a result of the program. One respondent cited a third-grade student with a discipline problem who so enjoyed hearing about his teacher’s experience that the student signed up for an additional science-related intersession course, created successful experiments, and has now set his sights on one day being part of the U.S. space program.

And because participating teachers utilize their experience to instruct students year after year, a multiplier effect is now occurring where teachers may instruct as many as 150 students per year and do so for the span of their careers. A completed documentary film highlights several program participants and shows how the experience impacted the teachers and their students. The film will be shown throughout 2009 as an additional aspect of the program.

2. Military & Veterans Support
As a defense contracting company, we at Northrop Grumman have a special affinity and responsibility for supporting active military and veterans. In 2008, as part of the company’s more focused support of these important military and veterans programs we instituted the following approach:

Military support: Chose a common charity to support. Created a companywide event for troop support. Communicated military-related community relations activities more often and frequently.

Veterans support: Supported a companywide veterans event.

Care Packages, Nation-wide
Employees at a number of U.S. Northrop Grumman facilities joined together for various “Care Package Stuffing” events in Ft. Belvoir, Virginia; El Segundo, California; and Bethpage and Amherst, New York. Employees prepared more than 30,000 care packages for shipment to troops serving in Afghanistan, Iraq and other overseas locations. From 2003 through 2008 Northrop Grumman employee giving has raised $379,000 for USO care packages—$68,000 in 2008.

Three Key Programs
Designed for military families by the United Through Reading organization, this program is available to all deploying military units and enables parents serving in distant locations to read children’s books aloud via DVD for their children to watch at home. The company also assists military personnel—with the difficulty of moving from deployment to daily life—through Northrop Grumman’s Wounded Warriors Family Support organization and the Wintergreen Adaptive Sports Program (WAS). Since 2005 WAS—working with organizations such as Disabled Sport USA and with experts from military and veterans’ affairs hospitals—has enabled more than 75 personnel with combat injuries and their families to engage in sporting activities such as adaptive skiing, snowboarding and boating, and in mentoring and confidence-building sessions.

And through its own Operation IMPACT (Injured Military Pursuing Assisted Career Transition) program, Northrop Grumman helps people identify career opportunities within the company for returning service men and women severely injured in combat. To date, the program has helped 34 returning service personnel and their family members join the Northrop Grumman team.
3. Disaster Relief Efforts

In 2008 a number of natural disasters hit the U.S. and other parts of the world. Both the company and our employees responded to assist fellow employees and other victims of the disasters that included: China earthquake, Myanmar floods, Midwest floods, Virginia and Colorado tornadoes, Florida fires and hurricane, and Southern California wildfires.

In addition to providing a company contribution, Northrop Grumman matched employee donations to the following relief agencies: American Red Cross, AmeriCares, United Way Brevard County, American Red Cross International, Habitat for Humanity International and World Vision International.

Improvement Opportunities

1. Increase employee volunteerism through the volunteer management system and create a companywide recognition program utilizing employee-reported information.

2. Continue to enhance both internal and external communications about community involvement programs and initiatives.

Looking Forward: 2009 Focus

1. Increased reporting on volunteer programs, which includes employee use of the volunteer management system. More accurate reporting of employee volunteer efforts and community involvement interest will help us better develop new initiatives and programs.

2. Development of a proactive disaster relief program. Possible elements include identifying an organization to assist with international disaster relief preparedness, and preparing internal systems to enable employees immediate response when a disaster strikes.

3. Temporary realignment of resources to address current economic hardship and human services needs. This includes:

   - Providing employees with volunteer opportunities to support human service organizations
   - Sponsoring additional food and clothing drives throughout 2009
   - Targeting an increased corporate contribution percentage for human services support

Awards & Recognition

California Legislature Assembly, "Certificate of Recognition" in appreciation for hosting and supporting the 2008 USO Operation Care Package Stuffing Party and for exemplary commitment to military service members.

City of Los Angeles, California, "Certificate of Appreciation" in recognition of strong support and contributions to the success of L.A. Works, Inc. in their volunteer efforts to improve the quality of life in Los Angeles.


Human Rights Campaign, recognition of achieving 100 percent on the Corporate Equality Index.


Make-A-Wish Foundation, "Outstanding Corporate Support" award.

National Coalition for Homeless Veterans, "Outstanding Corporate Leadership" award.

San Diego County and Imperial Valley Chapter of the California Association of Regional Occupational Centers and Programs, "Distinguished Business Award" for Project Lead the Way.

Titusville, Florida, Area Chamber of Commerce Education Committee, "Partners in the Business of Education" award from Astronaut High School in Titusville, Florida, for efforts in education.

United Way of Greater New Orleans, "Campaign Top 10."

United Way of the Virginia Peninsula, "2008 Community Cares Award" to Shipbuilding sector employees (Newport News, Virginia) in recognition of continued commitment to community.

U.S. Department of Veteran Affairs, "Corporate Achievement Award" to Northrop Grumman Shipbuilding sector (Newport News, Virginia) for significant efforts in expanding business opportunities for veterans and service-connected disabled veterans.

U.S. House of Representatives, "Certificate of Special Recognition" presented to Northrop Grumman employees in recognition of volunteer community service in repairing and refurbishing the Hawthorne Veterans of Foreign War Post 2075 building.
As part of our corporate responsibility efforts, we are aligning our business with sustainability practices, embracing green initiatives and translating our values into measurable actions. In 2008, Northrop Grumman took several actions to develop its Environmental Sustainability program. The company created three teams to advance Northrop Grumman’s commitment to environmental performance, both internally and externally: 1) Earth Environmental Integration Group; 2) Green Opportunities Group; and 3) A cross-department internal team including Environmental, Health & Safety (EHS), Communications, Corporate Responsibility, Procurement and Real Estate/Facilities, and others.

The internal team assessed existing Northrop Grumman “green” activities, benchmarked against peer companies to identify “best in class” green programs, and identified more than 100 opportunities to advance the Environmental Sustainability program. We are now prioritizing these opportunities for implementation based on financial, regulatory, people and corporate responsibility factors.
Greenhouse Gas (GHG) Inventory Project
To reduce the carbon footprint created by Northrop Grumman operations, and in anticipation of upcoming new regulations, the EHS Leadership Council championed an initiative in 2008 to develop a way to accurately quantify company-wide greenhouse gas emissions. A cross-functional team has been working to procure a software system and develop a data collection process. The software system and data collection process should be up and running, in a tiered approach, in 2009.

Worker Safety Excellence Award
In 2008, Northrop Grumman won two prestigious Aerospace Industries Association (AIA) Worker Safety Excellence Awards for “Lowest Injury and Illness Rate” in both the “Aircraft Manufacturing” and the “Aerospace Components” sector categories based on 2007 incident rates. Integrated Systems and Electronics Systems, respectively, were the Northrop Grumman sectors that received the awards.

Saving Energy & Resources
A number of conservation projects at Northrop Grumman facilities are reducing energy and resource consumption, including:

Water
Plumbing at the St. Louis, Missouri site is a closed-loop, chilled water system that re-circulates water through the labs to cool laser systems, which saves approximately 500,000 gallons of water each year.

Site engineers at various facilities upgraded a number of cooling towers to significantly reduce water consumption.

Many sites are equipping the restrooms with automatic restroom faucets and waterless urinals. As one example, the Space Park facility in Redondo Beach, California, replaced 11 percent of its urinals with waterless equipment, which translates to 400,000 gallons of water saved in 2008. At the same facility during a building remodel, much of the landscaping was replaced with new low-water-use foliage that resulted in saving an additional 200,000 gallons of water in 2008.

Energy
At the Bethpage, New York site, a computerized building management system cycles heating and cooling units off at 11:30 p.m. each night and back on at 5:30 the next morning. The site also uses green lights with energy-efficient ballasts and lamps with digital technology. As a result, electricity used for lighting at the Bethpage site has been reduced by 75 percent.

Northrop Grumman employees at various facilities are using flexible office programs (alternate work weeks and telecommuting) and commuter services programs (rideshare services, bicycle lockers, vanpools, subsidized mass transit tokens and other incentives). The two largest Northrop Grumman sites in Southern California each achieved record Average Vehicle Ridership rates in 2008.

To save energy at one site, employees compared energy performance (at several Northrop Grumman buildings) against the Energy Star Portfolio Manager. This resulted in a 50 percent reduction in energy consumption and more than $150,000 in savings with no capital investment. The Westfield IV facility in Chantilly, Virginia achieved silver-level LEED certification.

At the Redondo Beach, California, facility:

1. Engineers installed energy-efficient reflective roofs on six buildings and saved 1.8 million kilowatt hours and $250,000.
2. Fluorescent replacement bulbs in two buildings saved 580,000 kilowatt hours and $80,000.
3. Engineers replaced 30-year-old centrifugal chillers with high-efficiency units saving 2.9 million kilowatt hours and $400,000.
4. Minor temperature and humidity level adjustments inside the buildings saved 10.2 million kilowatt hours and $1.4 million.
Recycling

Employees at sites across the company recycle paper, cardboard, scrap metal, wood, foundry sand, computers and related equipment, and other materials such as batteries, tires, fluorescent light tubes, mercury thermometers, cables and more. In St. Louis, Missouri, employees initiated a new recycling effort with fluorescent bulbs wherein they return the bulbs to the distributor for recycling and in exchange, receive a rebate.

In total, with approximately 30 percent of sites reporting, Northrop Grumman recycled 30 percent of its total solid waste generated in 2008.

Rounding Up E-Waste

Employees at the El Segundo, California facility collected more than 23,000 pounds of electronic equipment from fellow workers and at an event in conjunction with the city of El Segundo.

Two sites in Florida hosted e-waste roundups, one in conjunction with a local community, and collected more than 6,400 pounds of electronic waste.

The Manhattan Beach, California site hosted the annual household hazardous waste and e-waste roundup in partnership with Los Angeles County and the city of Manhattan Beach.

Earth Day Events 2008

A number of Northrop Grumman sites hosted Earth Day celebrations, including many in coordination with local communities. Employees received educational materials and reusable grocery bags at several locations, and employees got the chance to show off their green vehicles. Other highlights:

- Provided collection points for the “Cell Phones For Soldiers” program, where employees recycle old cell phones and as a result, donate calling cards to military personnel, for the “Give the Gift of Sight” program, where employees turn in used eyeglasses for refurbishment and donation to people around the world, and for used batteries for recycling.

- Set up areas where employees calculated their carbon footprint, sampled fare from an organic farmer’s market and put themselves behind the wheel of a “Zero Emission, No Noise” (ZENN) neighborhood electric vehicle.

Reducing Environmental Impacts with Community Involvement

Planting Trees

For the third consecutive year, Northrop Grumman employees helped plant trees for the “Trees to the Sea” project in Los Angeles, California. The nonprofit-sponsored project planted a total of 500 trees along the Imperial Highway between the city of El Segundo and Los Angeles International Airport.

Cleaning Beaches

Employees at the El Segundo, California site helped clean beaches with “Heal the Bay,” a nonprofit environmental organization dedicated to making Southern California coastal waters and watersheds safe, healthy and clean. The Shipbuilding sector (Gulf Coast) employees partnered with local communities by participating in the Mississippi “Gulf Coast Cleanup” and the Louisiana “Save Our Lake Beach Sweep.” Cleanup areas in Mississippi included Singing River Island in Pascagoula and the historical Turkey Creek Community in Gulfport, and in Louisiana, Lake Ponchartrain in New Orleans.

Policy & Commitment

To guide and oversee the company’s Environmental, Health and Safety (EHS) stewardship, we rely on the EHS Leadership Council, which comprises senior EHS leaders from the corporate office and each of the business sectors. Established in 2003, the Leadership Council’s key strategic initiatives and goals are to build a sustainable EHS infrastructure, set goals, monitor and report EHS performance, and establish initiatives that support continual improvement. More specifically, the Leadership Council’s mission is to:

1. Enhance our integrated EHS management system.
2. Promote management ownership of EHS programs at all levels to continually improve EHS performance.
3. Engage, support and empower all employees to achieve our objectives for improving EHS management and compliance.
4. Share resources, knowledge, best practices and lessons learned at all of our facilities.
One key tool to accomplish these goals is our metrics website, established in 2004, that is now the central system for collecting, tracking and reporting key EHS performance data across the company. In 2005, the Leadership Council established new initiatives and goals extending to 2010. These initiatives and goals are reviewed and evaluated each year for performance, modification and confirmation.

Some initiatives focus on environmental performance (Environmental Sustainability), including compiling information on recent energy savings, recycling and other projects; identifying opportunities to improve our performance; and establishing Environmental Sustainability teams (Employee Resource Groups) dedicated to environmental performance improvement. At the end of 2008, the Leadership Council added two new metrics for solid waste/recycling and water consumption. Going forward, the Leadership Council is developing a new safety metric as well as management systems criteria to help advance the program in order to meet increased internal and external expectations. New goals will be established for these metrics, to be initiated in 2010.

Commitment to the Environment

In 2008, Northrop Grumman launched its Environmental Sustainability program, which aims to advance Northrop Grumman’s commitment to environmental performance both internally and externally. Here are some 2008 highlights:

- Communicated Earth Day statements from Ron Sugar and Wes Bush.
- Published new internal and external web pages on environmental performance.
- Established a foundation partnership with Earthwatch Institute to develop an innovative environmental education program. Teachers across the country will get the chance to participate in an Earthwatch expedition focused on climate change and ocean preservation, an invaluable transfer experience between the real world and classroom.
- Developed a greenhouse gas strategy/plan.
- Defined system requirements and developed a repeatable process for greenhouse gas data.
- Collected an initial estimate of greenhouse gas emissions and water-use data.
- Established a web-based data collection tool to collect annual data on water use and solid waste generation and recycling.
- Switching lightbulb manufacturers—choosing greener alternatives to achieve energy savings, labor savings and procurement savings (bulbs last longer, so need less frequent replacement).
- Instituted furniture and carpet recycling at several Northrop Grumman facilities.
- Implemented a new requirement that janitorial service providers to Northrop Grumman use only “Green Seal Certified” chemicals.
- Deploying our Managed Print Solution across the company, which to date has eliminated almost 2,000 devices resulting in a 25 percent reduction in energy consumption and solid waste and a 20 percent reduction in paper use. By the end of 2009, we anticipate implementation at more than 50 percent of Northrop Grumman sites.
- Achieved “SmartWay” certification as a freight shipper. Through such “load consolidation” programs, we are targeting a reduction of more than 1 million freight miles in 2009 and an additional half million miles in 2010. A high percentage of Northrop Grumman freight travels via companies that meet the rigorous standards set to become SmartWay Certified.
- Developing an ECO Model to help evaluate and prioritize candidate Environmental Sustainability projects using a combination of traditional financial measures and green criteria.
- Established a companywide Energy Conservation Task Force.

Environmental Sustainability teams are increasing employee involvement by bringing people together to identify and implement projects to improve the environment at work. And as a bonus, many employees are taking these lessons home! One such team, some 100 highly engaged participants at the Northrop Grumman site in El Segundo, California, has established a website to support the team’s activities and interests, including its first project: expanding site-wide collection of paper for recycling. The team is now establishing a process to expand the collection of recyclable bottles and cans. The team also provides volunteers for various community events and supports company events such as e-waste roundups. In 2009, the team’s attention will focus on energy efficiency projects and engaging employees to help conserve energy.
2008 Areas of Focus

1. Following Stringent EHS Standards

To help ensure legal compliance, ethical and safe operating practices, and continual improvement in our manufacturing facilities, Northrop Grumman encourages company sites to conform to external environmental, health and safety performance standards. Northrop Grumman’s EHS Leadership Council supports participation in the following standards, which help define the optimal EHS management system for Northrop Grumman’s operating entities:

1. The International Organization for Standardization (ISO) 14001 (Environmental Management Systems) registration.
2. U.S. Occupational Safety and Health Administration (OSHA) Voluntary Protection Programs (VPP) Star status.

ISO 14001

Sites registered to the ISO 14001 standard demonstrate an ongoing commitment to sound environmental management programs and processes, with a full commitment to:

1. Establishing an environmental policy that is documented, communicated to all employees and available to the public.
2. Full compliance with environmental laws and regulations.
3. Pollution prevention.
4. Continual improvement.
5. Satisfaction of customer and community requirements.

The ISO 14001 standard also includes comprehensive planning phases, implementation plans, adoption of monitoring and corrective procedures, and ongoing management reviews. Currently, 22 Northrop Grumman sites have attained ISO 14001 registration status. We expect that number to increase over the next several years.

Occupational Safety & Health Administration (OSHA) Voluntary Protection Programs (VPP)

Facilities achieving this standard must develop and implement management systems that identify, evaluate, prevent and control hazards to reduce employee injuries and illnesses. To qualify with a VPP Star designation, a site must have:

1. An OSHA recordable rate at, or below, its industry standard.
2. A comprehensive management system and compliance program.
3. A process to periodically verify program continuity.

According to OSHA, VPP participant sites have lower occupational injury rates and costs than non-VPP sites and are considered by OSHA to be among the safest workplaces in America. OSHA points out other benefits as well: improved employee morale, increased productivity and reduced workers’ compensation insurance premiums.
VPP Recognition

Twelve Northrop Grumman sites are now participants in OSHA’s Voluntary Protection Program: Ten sites received the prestigious VPP “Star” designation, and two additional sites received the “Merit” designation. Achievement of this OSHA Star/Merit status is quite significant. With more than 8 million worksites in the United States, there are only about 2,100 designated with the “OSHA VPP” status. Further, the Newport News, Virginia, site has been a certified Star site since 1995, and is the largest such site in the U.S.

<table>
<thead>
<tr>
<th>Year</th>
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<tbody>
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OHSAS 18001

OHSAS 18001 is an international health and safety management system specification that helps organizations control occupational health and safety risks and improve health and safety performance. Conformance to the standard is demonstrated via audits by an independent body. To date, three Northrop Grumman sites have been registered to the standard: Moss Point, Mississippi; New Town, North Dakota; and Rancho Bernardo, California.

EPA Performance Track

The U.S. Environmental Protection Agency’s (EPA) National Environmental Performance Track program recognizes and drives environmental excellence by encouraging companies with strong environmental records to go above and beyond the legal requirements. Members typically set four measurable goals to improve the quality of the air, water and land. Currently the program has more than 500 participants, including two Northrop Grumman facilities:

- In 2005, senior leadership at the Manhattan Beach, California site committed to substantially reduce its use of trichlorobenzene. In April 2008, employees at the site completely eliminated use of this chemical.

- In 2008, senior leadership at the St. Augustine, Florida site committed to reduce energy consumption and greenhouse gas emissions by reducing incinerable and fuel-blended waste and implementing a Vehicle Optimization Plan. Results of these efforts will be published in future editions of this report.
2. Reducing and Managing Hazardous Waste

Through company-mandated pollution-prevention programs, waste treatment and recycling, material substitution and waste minimization efforts, the volume and toxicity of company waste materials have decreased. Additionally, carefully managing the remaining waste is an ongoing priority. We use only audited and approved hazardous waste firms that meet stringent operational standards for the safe handling, packaging and transportation of all company-generated hazardous wastes.

At Northrop Grumman, multiple ongoing acquisitions and divestitures present challenges in establishing clear historical baseline data for hazardous waste and air emissions. While reductions in waste generation have been ongoing for many years, measurement progress in other areas, such as air emissions and greenhouse gases, etc., has been slower.

We are committed to collecting data using common metrics and then identifying and implementing reduction strategies. To provide consistent reporting across the corporation, we established a baseline year of 2005 to begin documenting selected environmental data. In July of each year, we collect and report the data for the previous calendar year. The company has collected data on two key metrics:

1. Production-related hazardous waste.
2. Reported EPA Toxics Release Inventory (TRI) chemical releases.

In 2005, our baseline year, the corporation generated 3,851.6 tons of production-related hazardous waste, or 3.27 tons per 100 full-time equivalent (FTE) employees. Northrop Grumman also reported the release of 759.4 tons of TRI chemicals, or 0.64 tons per 100 FTEs.

In 2007, the corporation generated 3,459.2 tons of production-related hazardous waste, or 2.84 tons per 100 FTE employees. Northrop Grumman also reported the release of 308.4 tons of TRI chemicals, or 0.25 tons per 100 FTEs.

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<th>2007 (Metrics website)</th>
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<tr>
<td>TRI (Tons/100 FTE)</td>
<td>0.64</td>
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</table>

Remediation

The company is currently involved in approximately 190 environmental remediation projects (including Superfund sites) with an approximate annual remediation budget of $45 million. We are actively engaged in these remediation projects and have made steady progress in their successful completion. Due to the complexity of certain projects, some remediation efforts may extend to the year 2040. From 2004 to 2008, we completed active remediation at 62 sites and removed them from the portfolio, and we identified $43.8 million in life-cycle cost reductions.

Processes

To achieve our remediation objectives, we first develop a site management strategy for each location. This strategy provides a cost-effective, site-specific plan to bring the project to closure. The environmental team then employs a process called “Remedy Identification, Evaluation and Selection” to ensure remedies that are safe and effective, comply with applicable legal requirements and minimize long-term costs.

The environmental team uses innovative remedial technologies, whenever possible, to bring projects to closure. The team has successfully employed a variety of technologically advanced, in-place treatment methodologies to permanently eliminate contamination, including:

a) Chemical oxidation - Injecting a chemical oxidant into the subsurface to degrade contaminants to nontoxic end products. This technique was successful at sites in California, New Jersey and Virginia, where the cleanup time frame was dramatically accelerated from decades to months, with no long-term maintenance requirements.

b) Electrical resistive heating - Using electric current to heat soil and groundwater to remove contaminants through a process called volatilization. Northrop Grumman has used this process at projects in Missouri and California. The main ecological benefit is leaving the ground surface with minimal disturbance during and after the treatment.
c) Biodegradation - Introducing organic agents to trigger and enhance natural biological activity to eliminate contaminants. For example, this technique successfully decreased the original contaminant levels to at least half their original concentrations in five sites around the country. Furthermore, the successful implementation of these bioremediation programs in two locations resulted in the complete shutdown of long-term pump-and-treat systems that had been the typical industry approach for groundwater remediation. In turn, this effectively reduced the regulatory compliance requirements for these sites to a “monitoring-only” program.

d) Steam-enhanced extraction - Using steam to heat the soil and groundwater to remove contaminants once trapped in the pore spaces of the formation. The successful implementation of this technique at a site in Pennsylvania has reduced the contaminant level to less than half of the original estimate in only six months of operation.

3. Pollution Prevention Programs

It is our intent to reduce negative impacts to water, soil and air, to recycle waste materials and to conserve energy. To do so, facilities develop and implement pollution-prevention (P2) programs. The company’s policy is to require P2 programs at all sites. EHS professionals facilitate the communication and transfer of P2 best practices across the corporation. These best practices are an integral part of the continual improvement of many environmental management systems at numerous Northrop Grumman facilities.

We prefer to focus on eliminating the source of pollution rather than relying on traditional “end-of-pipe” controls. Our methods include source reduction, material substitution and various other means of reducing impact. Current research projects include:

- Testing a non-chromated, corrosion-inhibiting aircraft primer.
- Working with coating manufacturers to develop a non-chromated, corrosion-inhibiting aircraft fuel tank coating.
- Developing various UV-curable, low-observable coatings for aircraft that are free of hazardous air pollutants.
- Developing nickel-free conductive fillers for aircraft.
- Developing new application methods for “high-solids” ship coatings.
- Introducing plural-component coating application equipment for ship manufacturing.
- Expanding the use of innovative paint cartridge application methodology to aircraft carrier production.
- Increasing quality and reliability of risk reduction by participating in a lead-free working group that deals with lead-free alternative materials and methods.
- Evaluating lower volatile organic compound (VOC) wipe solvents for general aircraft cleaning.
- Evaluating pre-saturated wipes to reduce the amount of cleaning solvents used.
- Implementing vacuum-equipped sanders and drills to reduce airborne dust and particles at aircraft manufacturing facilities.
- Developing zero VOC mold-in-place coating to eliminate the need for associated paint spray booths and VOCs.
4. EHS Audits

We conduct audits to promote compliance, improve EHS program performance and identify best practices. The scope of each audit includes assessment of compliance with applicable laws and regulations, company policies, procedures, goals and the company’s EHS management systems criteria. The actual audits follow an established written protocol that specifies:

1. How audits are planned, prioritized, scheduled, and conducted.
2. Audit scope documentation requirements.
3. Pre-audit and on-site audit activities.
4. Post-audit activities and responsibilities, including development and implementation of corrective action plans.

The EHS audit program is mandated by the Board of Directors and reviewed annually by the Corporate Internal Audit organization. Each sector is responsible for implementation and maintenance of the audit program in accordance with the corporate protocol. The management systems portion of the audit is conducted by a representative of the corporate EHS staff.

Each audited site receives an overall assessment rating of “green” (satisfactory program), “yellow” (marginal program) or “red” (unsatisfactory program) as defined by the audit color rating assessment table. At the conclusion of each audit, site management and EHS staff prepare a Corrective Action Plan (CAP) in response to all audit findings and recommendations. CAPs are tracked to completion on the EHS Metrics website, with expected completion within 12 months from the last day of the audit.

Approximately one-third of the company’s auditable sites are audited each year. In 2008, we conducted 41 audits across the corporation; 33 (80 percent) received overall “green” ratings, six received “yellow” and two received “red” ratings. In 2007, the number of audits conducted was 43; 37 (86 percent) sites rated “green”, five rated “yellow” and one “red.” We plan to conduct more than 50 audits in 2009. Of the “yellow” and “red” sites audited in 2007 and 2008, two in each year were newly acquired sites.

5. Safety Performance

a) Background

Northrop Grumman continues its proactive approach, formalized in 2004, to drive down the number of injuries and illnesses across the corporation. At the helm, the EHS Leadership Council monitors our safety performance and serves to champion initiatives that enhance the maturity and effectiveness of our safety programs. In 2007, improved visibility and management accountability for safety performance became an increased focus for the EHS Leadership Council. However, audits, risk factor evaluations, management systems assessments, ergonomics, sharing best practices, behavior-based safety and targeted interventions served as fundamental contributors to the success of our safety performance.
Additionally, we have partnered with a loss control consultant and our insurance broker to identify key sector loss drivers, trends, opportunities and strategies to reduce the frequency and severity of workers' compensation cases. Each sector works with the loss control consultant to develop and implement a strategic loss control plan that is tailored to support sector and company injury and cost reduction/containment goals. These plans are updated annually to account for changing loss drivers, trends and exposures. We are currently working with our insurance broker to align our loss control strategies with the results of an actuarial analysis to predict our annual workers’ compensation insurance premiums.

Some specific sector programs include:

Electronic Systems sector continues to hold each site to a formal, specific annual improvement plan. Shipbuilding Gulf Coast Operations instituted a “Why I Work Safely” campaign and Foreman Accelerated Safety Training (FAST).

The Space Park Ergonomics Program implements a proactive approach for capturing high-risk employees for one-on-one evaluations. This has been successful in mitigating ergonomic hazards and repetitive motion injuries. In addition, an automated reporting system utilizing electronic tablets for ergonomic evaluations was implemented, making this program paperless. This program was recognized as a best practice during the 2008 CEHS (Corporate Environmental Health & Safety) audit.

Integrated Systems sector recognizes those employees making a significant contribution to safety as Safety Heroes. Their achievements are highlighted in sector communications and with a recognition gift. The sector also launched its web-based process for any employee to report a safety concern or to request an ergonomic evaluation at their location.

b) Metrics

2004 was the baseline year in which we began consistent safety performance reporting across the corporation. At that time, we established a goal to reduce our OSHA Total Case Rate by 8 percent per year over a five-year period beginning with 2004. The Total Case Rate is the total number of OSHA recordable occupational injuries and illnesses (cases requiring medical treatment beyond first aid) per 100 full-time workers (FTW).

Total Case Rate

New acquisitions and business growth contributed to an increase in the total number of employee hours worked, from approximately 220 million in 2004 to more than 256 million in 2008. During that period the Total Case Rate steadily declined from 5.46 per 100 FTW in 2004 to 3.25 per 100 FTW in 2008, a 40 percent reduction.

Injury & Illness Cases:

Even more noteworthy was the reduction in the actual number of occupational injury and illness cases within Northrop Grumman. In 2004 there were 6,032 cases documented, whereas in 2008 the number of injury/illness cases dropped to 4,169, a 31 percent reduction.

Days Away from Work Case Rate:

The Days Away from Work Case Rate, defined as the total number of lost-workday cases per 100 FTW, dropped from 1.72 in 2004 to 1.14 in 2008, a 34 percent reduction.
Areas for Improvement

1. Unfortunately, in 2008 two work-related fatalities and two serious injuries occurred at Northrop Grumman sites. As part of our response, we began working diligently with our workers’ compensation carrier and Shipbuilding sector to clearly identify our higher-risk conditions and to develop and implement appropriate mitigation strategies. These efforts include development of a new model to identify risk areas by type and a review of the effectiveness of our root-cause analysis process.

2. In 2008 we experienced 171 federal regulatory agency visits/contacts, resulting in 41 notices of violation. Some of these were procedural in nature and resulted in no fines, such as ensuring the immediate availability of certain documentation, but nevertheless represented regulatory shortcomings.

3. The internal EHS audit program results showed a slight decrease in performance over 2007. We interviewed each site manager whose 2008 audit resulted in an overall red or yellow rating. As a result of those interviews, we identified some process improvement opportunities including maintaining executive visibility throughout the process, and we instituted selected enhancements to the audit program.

Looking Forward: 2009 Focus

We continue to reinforce compliance with EHS laws, regulations, and company policies and procedures, and promote increased management ownership of EHS responsibility. We will revise our management systems criteria to reflect increased EHS performance expectations from employees, management and external stakeholders. As we implement sustainable processes to measure and report environmental metrics such as greenhouse gas emissions, energy and water consumption, and solid waste/recycling data, we will be able to establish meaningful goals for performance improvement. For 2009, the EHS Leadership Council has committed to collect data on water consumption and solid waste generated and recycled.

2008 Awards & Recognition

Hampton Roads Sanitation District, second consecutive award to the employees in Newport News, Virginia, for outstanding compliance with wastewater standards.

Industrial Environmental Association and the California Manufacturers & Technology Association, the “California Environmental Responsibility” award to employees in San Diego, California, for eliminating all discharges, including storm water, to the San Diego Bay.

Los Angeles County Sanitation Districts, Certificate of Recognition to employees at the Space Park facility in Redondo Beach, California, for full compliance with wastewater discharge standards for calendar year 2007.

Operation Save New York Energy Conservation Program, “Gold Performance” award to employees at the Bethpage, New York facility for voluntary reductions in energy use during demand periods (6,750 kilowatts versus a goal of 4,000 kilowatts).

One of our El Segundo, California buildings received the prestigious Energy Star designation for its superior energy performance.

“Air Pollution Control Achievement” award to the employees at the Huntsville, Alabama facility for achieving a 90 percent reduction in the emission of isopropyl alcohol.

State of California, “Waste Reduction Award Program” (WRAP) for success in reducing solid waste at six Southern California facilities. The 2008 awards were in recognition of efforts at the El Segundo and Palmdale sites, and mark the company’s 28th such award, going back to 1992, for efforts to minimize waste through recycling, reuse and employee education.

U.S. Department of Energy, “Energy Champion” recognition of the St. Augustine, Florida site for implementing numerous energy conservation improvements (as defined by reducing energy consumption more than 20 percent with a commensurate reduction in greenhouse gas emissions).

U.S. Environmental Protection Agency, “Green Lights” award to the employees at the Baltimore, Maryland facility for retrofitting lighting fixtures and ballasts with T-8 fluorescent lamps and electronic ballast technology.