



**National Advisory Council for
Environmental Policy and Technology**

July 11, 2011

The Honorable Lisa P. Jackson
Administrator
United States Environmental Protection Agency
1200 Pennsylvania Avenue, NW
Washington D.C. 20460

RE: Second NACEPT Advice Letter on EPA Workforce Planning:

- Leadership Capabilities and Culture for “One EPA” (Topic #4)
- Strategies to Obtain and Retain Scientific and Technical Expertise (Topic #2)

Dear Administrator Jackson:

The National Advisory Council for Environmental Policy and Technology (NACEPT) is working on your charge to provide advice for development of the Agency’s next Strategic Workforce Plan. The charge comprises the following topics:

1. Scientific and technical competencies needed to be prepared for tomorrow’s challenges.
2. Strategies to obtain and retain scientific and technical expertise.
3. Strategies to attract and retain superior executive leadership talent.
4. Leadership capabilities and culture for “One EPA”.
5. Ensuring diversity.

On January 31, 2011, NACEPT responded with an advice letter on Topic #1 (“Scientific and technical competencies”). This second Advice Letter summarizes NACEPT’s recommendations addressing Topic #2 (“Strategies to obtain and retain scientific and technical expertise”) and Topic #4 (“Leadership capabilities and culture for One EPA”). We anticipate providing a third advice letter on Topic #3 (“Strategies to attract and retain superior executive leadership talent”) and Topic #5 (“Ensuring diversity”) by late 2011.

**RECOMMENDATIONS AND RESPONSE TO THE FOURTH QUESTION IN THE CHARGE:
STRATEGIES TO ADVANCE THE “ONE EPA” GOAL**

“What might a “typical” developmental path look like in an organization that focuses on the leadership capabilities and culture required to achieve One EPA? What measures could the agency put in place that would best exemplify progress in achieving One EPA and measure the associated leadership capabilities and culture?”

The ideal of “One EPA” was part of the rationale for creating EPA in 1970 when several offices scattered throughout the federal government were combined into a single agency. Some of EPA’s early leaders were committed to a holistic approach to environmental problems, despite Congress’ jurisdictional divisions and other pressures for compartmentalization of programs.

“Dealing separately with pollution problems in air, water, and land defies a growing understanding of pollution problems. Pollutants generally, toxics in particular, tend to move readily among air, water, and land. A disparity exists between the multiple environments defined by statutes, regulations, and Congressional committees and the one natural environment with which those policies and institutions try to deal.”

- Russell Train

Over time, however, as the nation’s lawmakers handed EPA more and more responsibilities and as the Agency experienced dynamics that affect many large bureaucracies, its internal “stovepipes” hardened and a “silo mentality” increasingly frustrated the original aspiration to act “as one.” The new “One EPA” goal reflects an understanding that this compartmentalization process has gone too far and that rekindling the aspiration of the Agency’s founders to think and work in an integrated and collaborative way is important for improving EPA’s effectiveness.

EPA is not alone in addressing this theme. In a survey conducted by the Center for Creative Leadership, 71 percent of senior executives said coordinating across horizontal boundaries has become their biggest challenge because of the intransigence of stovepipes, turf battles and the difficulty of developing the new mindset and skills needed to achieve genuine collaboration across their organization. Managing vertical boundaries was seen as the biggest challenge by a mere 7 percent. However, fewer than 1 out of 10 senior executives surveyed feel they have the skills needed to lead effectively across horizontal boundaries. At the same time, 92 percent said that the pressure to innovate in order to improve efficiency and develop better products and services will be the strongest trend impacting their organizations and that integrating experience and expertise across functions is critical for that innovation to be achieved.

This recent work by researchers with the Center for Creative Leadership highlights the concept of *boundary spanning leadership* as the key requirement today for meeting the increasingly complex challenges that most large organizations face. They define boundary spanning leadership as “the capability to establish direction, alignment and commitment across boundaries in service of a higher vision or goal.” They single out horizontal boundaries as posing the greatest challenge, but recognize the importance of vertical, stakeholder, demographic/cultural and geographic boundaries. They stress the importance of developing this leadership capability at the middle management level as well as the senior executive level. Jeffrey Yip, Chris Ernst and Michael Campbell, *Boundary Spanning Leadership*, Center for Creative Leadership (2011), <http://www.ccl.org/leadership/pdf/research/BoundarySpanningLeadership.pdf>, and Chris Ernst and Donna Chrobot-Mason, *Boundary Spanning Leadership: Six Practices for Solving Problems, Driving Innovation and Transforming Organizations*. McGraw-Hill (October 2010).

EPA's organizational structure serves the function of breaking work into manageable chunks, but when a silo mentality becomes too strong, it can constrain both thinking and action. Silos can distort thinking by limiting information sharing and learning across horizontal boundaries. They can impair sight of the big picture of the Agency's major priorities, challenges and opportunities. This insular perspective can lead to framing problems too narrowly, which produces narrow solutions that fail to get at underlying causes or shifts the problem from one media to another. In a similar way, cultural boundaries between generations and geographic boundaries between headquarters and regional offices can limit information sharing and learning.

Rigid boundaries also constrain ability to act effectively. When organizational units become too insular and self-focused, it becomes more difficult to coordinate action across internal boundaries. Sub-units' self-interests can trump larger organizational interests. Us vs. them attitudes can impede collaboration. Unproductive differences in organizational culture and approach become entrenched.

Above all, rigid boundaries undermine the outward perspective and flexibility needed to foster innovation. EPA needs to address effectiveness, not just efficiency, and improving effectiveness requires innovation. Rapid technological change, generational shifts, revenue challenges, political change, and both persistent and newly emerging environmental challenges all require innovation. And innovation requires a significant shift in organizational culture and individual behavior to foster "intense cross-boundary interaction between the organization and its stakeholders across internal boundaries of level, function, demography and location." (Yip, Ernst and Campbell, see above)

EPA can help foster systems thinking that can identify the roots and interactions of problems and cross silos. Better integration of knowledge across the Agency can have big payoffs in terms of finding superior solutions and avoiding downstream costs for unintended consequences, litigation, delays and cleanups.

Situations like Hurricane Katrina and the Deepwater Horizon oil spill highlight the potential for enhanced interagency and intra-EPA cooperation. Stovepipes become more permeable as people pull together to respond to a crisis; the result can be that the organization as a whole becomes more effective. The challenge is creating an environment where people act this way much of the time, recognize the constraints of silos, and are internally motivated to think and act cooperatively across boundaries. This is and should be the goal of the One EPA initiative.

Specific Recommendations – Strategies for Promoting a “One EPA” Mindset:

The conversation about One EPA is already well underway as illustrated by initiatives such as the new Executive Management Council structure, the formulation of One EPA Leadership Principles, and the One EPA intranet page. These initiatives are an excellent start and a strong demonstration of the seriousness with which EPA's leadership is pursuing the One EPA concept.

We suggest the additional strategies and ideas below for consideration. They are focused on the key challenge of spanning horizontal boundaries within the Agency to create a more cross-

functional organization where more people work with a strategic mindset in an environment that encourages cooperation across offices and regions. However, we recognize that there are other important “boundary spanning” challenges such as creating an organizational climate in which diversity and generational differences lead to cultural synergy rather than to culture clashes. The next NACEPT advice letter will address some of these additional dimensions.

1. Make the One EPA Principles a Core Aspect of EPA’s Organizational Culture – Developing an *outcome orientation* is especially important. Connecting day-to-day work to fundamental outcomes like reducing air pollution, as opposed to measures like number of cases handled, is a better way to motivate individual action and internal cooperation. Valuing *alignment* over narrow interests is a key to achieving a broad-based, shared understanding of problems and to implementing solutions that all can support. Maintaining strong, collaborative *relationships* across and outside the Agency supports effective boundary spanning leadership. Developing creative, integrated solutions requires a culture of *inclusiveness* that welcomes diverse views. Identifying with EPA as a whole, not just with a particular sub-unit, and feeling *ownership* over the Agency, will naturally encourage more coordinated actions to ensure the success of Agency efforts. Acting on these principles can breathe excitement and enthusiasm into EPA, reconnecting people with their passion for the environment and their aspiration to contribute to an organization that make a real difference.

2. Create One EPA Learning and Demonstration Projects – Ask senior leaders to pick important projects where cross-agency knowledge sharing and coordination would clearly be of benefit. Establish these projects in a way that demands integrated, cross-disciplinary systems thinking and then assemble the disciplines needed. Approach the issues involved in ways that build relationships across internal boundaries and encourage working together in more cooperative ways. Focus on thinking together about how to do it. Frame these projects as learning exercises and use lessons learned to develop future One EPA training modules.

3. Create One EPA Trainings – Develop training modules that introduce employees to systems thinking, explore the benefits of knowledge sharing and collaboration, examine the One EPA Principles, and set out a clear set of guidelines for putting the One EPA approach into practice. In these training sessions, build ongoing cross-office communities of practice for continuing learning and sharing of experience.

4. Review Current Management Accountability Arrangements in Terms of their Alignment with the One EPA Aspiration – Performance measurement systems can inadvertently create an atmosphere of competition rather than cooperation, causing program managers to develop a single focus on the success of their program as measured in numbers.

5. Modify EPA Job Descriptions and Create Cross-Functional Career Paths – Put more emphasis on systems thinking in hiring and promotion. In addition to outlining functional responsibilities, highlight the position’s cross-functional responsibilities and the relationships the individual is expected to develop outside the particular office or functional area in addition to outlining functional responsibilities. Highlight any programs or services for which the position shares responsibility and accountability. Identify career paths that move across the silos and offer on-the-job opportunities to develop systems thinking, with rewards and promotions

explicitly mapped. This can be combined with explicit multidisciplinary education incentives and greater use of cross-function teams as a strategy for innovation.

6. Engage Middle Management – While it is critical for senior EPA leaders to demonstrate new ways of thinking and acting, the One EPA mindset will not become routine unless all levels of leadership are engaged at headquarters and in the regions. This will require efforts to bring mid-level leaders into a more strategic level of thinking. Without a strategic context – requiring a better understanding of organizational priorities, challenges and opportunities – managers naturally focus on tactical and administrative matters and mostly pursue agendas that are clearly in their own area of expertise.

7. Develop a Common System for Recruitment – Develop a recruitment system that presents EPA as a “single brand” to potential employees and that reflects the One EPA aspiration in descriptive materials to potential employees and the public. At job fairs, cluster all EPA activity in one place, rather than at different tables.

8. Expand Rotational Assignments – Give employees more opportunities to engage in a range of assignments in different programmatic areas. Encourage job assignments across functions and locations to broaden employee’s perspectives and skills. Make experience in multiple areas of the Agency a qualification for achieving SES status.

9. Bring One EPA Into Mentoring and Onboarding – Encourage EPA senior leaders to mentor people not in their chain of command. Encourage them to make One EPA a major theme when they act as coaches for newly hired staff to make sure they are clear on their assignments, get early feedback and learn fast about the nuances of EPA’s culture.

10. Use Social Media and the Web – Technology is not a substitute for culture change, but given the right motivations it can empower internal (and external) stakeholders with the ability to communicate and work more fluidly across organizational boundaries. The One EPA intranet already being developed to share ideas on how to operationalize the concept is an important start. Creating a regularly updated EPA “Directory of Expertise” cross-linked to a database of resumes would be extremely useful for facilitating the creation of cross-disciplinary teams. Another approach, being pioneered at the State Department, is an internal encyclopedia modeled after Wikipedia for agency-wide knowledge sharing. Called Diplopedia, it is an online encyclopedia where over 3,500 employees have contributed over 12,000 articles. EPA could create an “Enviropeedia” along the same model. Platforms like Twitter that allow for easy, widespread participation can be put to a range of creative uses.

11. Explore Public-Private-NGO-University Executive Interchanges – Design these interchanges to bring private sector, NGO and university expertise into project leadership to inject additional technical knowledge and systems thinking and to strengthen recognition of the activities of EPA on behalf of American citizens.

12. Create Annual Awards for Contributing to the Success of One EPA – At the SES level, create an annual award program to recognize individuals who make a substantive contribution to the success of One EPA. This idea could also be applied to mid-level managers.

Making the change toward One EPA cannot be a one-time effort. To succeed, there must be continuous efforts to socialize both new and existing employees into this more cooperative mindset so that it becomes a permanent part of EPA's culture, the "new normal" of how to work at every level, every day.

RECOMMENDATIONS AND RESPONSE TO THE SECOND QUESTION IN THE CHARGE: STRATEGIES TO OBTAIN AND RETAIN SCIENTIFIC AND TECHNICAL EXPERTISE

"Based on the tools available to EPA for acquiring specific technical competencies, what specific strategies are recommended that will most effectively maintain a world-class workforce that is prepared to meet and exceed mission requirements? Are EPA's current programs sufficient, or could they be a part of a larger, more strategic approach to addressing shifting technical competencies? What strategies are needed to best meet the competencies identified in NACEPT's first advice letter (e.g., contractors, training of current staff, permanent hires, post-doctoral or other fellowships, etc.)?"

NACEPT was charged with evaluating the programs and tools used by the EPA to obtain and retain scientific and technical expertise and with determining their relative efficacy in providing measurable shifts in needed competencies. The charge was refined to address "strategies to retain scientific and technical expertise" to better align the desired outcome of the Agency with the Council's capabilities. NACEPT members interviewed Agency directors and key management and technical staff, including representatives from EPA Emerging Leaders Network. NACEPT members also reviewed and analyzed many reports, plans, audits and statistical data.

Hiring MCO – Balance of Supply and Demand:

NACEPT's first Advice Letter addressed the scientific and technical competencies to meet tomorrow's challenges. In addition to the scientific competencies that EPA identified as mission critical occupations and competencies (MCO, MCC), NACEPT recommended that EPA also consider expanding MCOs to include business and finance, social and behavioral sciences, computer and IT, environmental design and statistical analysis specialties. NACEPT emphasized the need for EPA to integrate interdisciplinary systems thinking, partnership cultivation and public outreach, and global perspective, as necessary MCCs for EPA's future challenges.

As EPA looks to the future, it should evaluate whether existing hiring, recruiting and retention practices will advance EPA's abilities in these particular MCOs and MCCs, as well as their traditional scientific and technical expertise. EPA's charge asked NACEPT about science and technical talent so much of our discussion will focus on those MCOs, as well as the opportunities for recruiting and retention that will help EPA address its projected future needs in the nontraditional areas NACEPT has identified.

One of the first questions NACEPT addressed was whether there would be a sufficient supply of talent being educated in the MCO disciplines to meet EPA's demand, particularly in the entry-

level employee category. There is an expectation that demand to hire MCOs will increase given the current demographics at EPA. Attrition trends are discussed more completely in the section on retention; however, overall, EPA has a workforce that is aging after spending full and satisfying careers at the Agency. EPA must be prepared for an increase in retirements from long-term employees across the management spectrum.

The EPA 2007 Strategic Recruitment Plan identified the total numbers of Permanent New Hires and Departures over an eight-year period as 5,911 new hires and 6,930 departures, respectively. EPA thus had a net loss of over 1,000 permanent employees during the 1998 – 2006 period. NACEPT understands from interviews with EPA personnel management specialists that this trend has continued. Voluntary departure rates and retirement eligibility rates place EPA in a precarious situation when expertise and know-how departs especially *if* an increasingly smaller pool of qualified candidates is available to fill vacancies.

To assess EPA's effectiveness at meeting its science and technical talent demand with the available supply, we considered data for enrollment of graduate students in Science and Engineering (S&E) fields along with data on EPA's recent hires. Nearly all of the recent (FY 2006 – 2010) hires were in the GS-7, GS-9, GS-11, GS-12, and GS-13 grade levels, which comprised 87% of the total hires, as shown in Figure 1. GS-7 (college graduates) and GS-9 (graduate and professional school graduates) comprised 11% and 32% of the total hires, respectively. It is likely that many recent graduates would be slotted into these two categories.

The Agency's demand for new hires by category, as shown in Figure 2, by percentage of total new hires, has been the highest for Physical Scientists (19%), Environmental Protection Specialists (14%), Environmental Engineers (10%), and Biologists (9%). This compares to the National Science Foundation's figures on graduate enrollment of science and engineering students in 2006. These data show students in the Physical & Earth, atmosphere and ocean sciences comprise 10% of all S&E enrollees. Biologists comprise 14%, and Civil, Chemical, and "other" Engineers comprise 8% of the total. (We use percentages because the absolute number of graduates reported by NSF is orders of magnitude higher than the actual number of personnel hired by US EPA, but there is not a perceptible imbalance in the educational categories attracting enrollees.)

Thus, for the categories that are more easily comparable, it appears that EPA is hiring at a similar percentage to the supply of recent graduates (Environmental Protection Specialist is not included as an easily comparable category.) This means that EPA should be able to fill MCO and MCC based on the supply of available graduates that are likely to fill the most common open entry- and mid-level positions. Therefore, it does appear that, in total, there is a sufficient supply of MCO scientific and technical talent at this level to meet EPA's hiring demands.

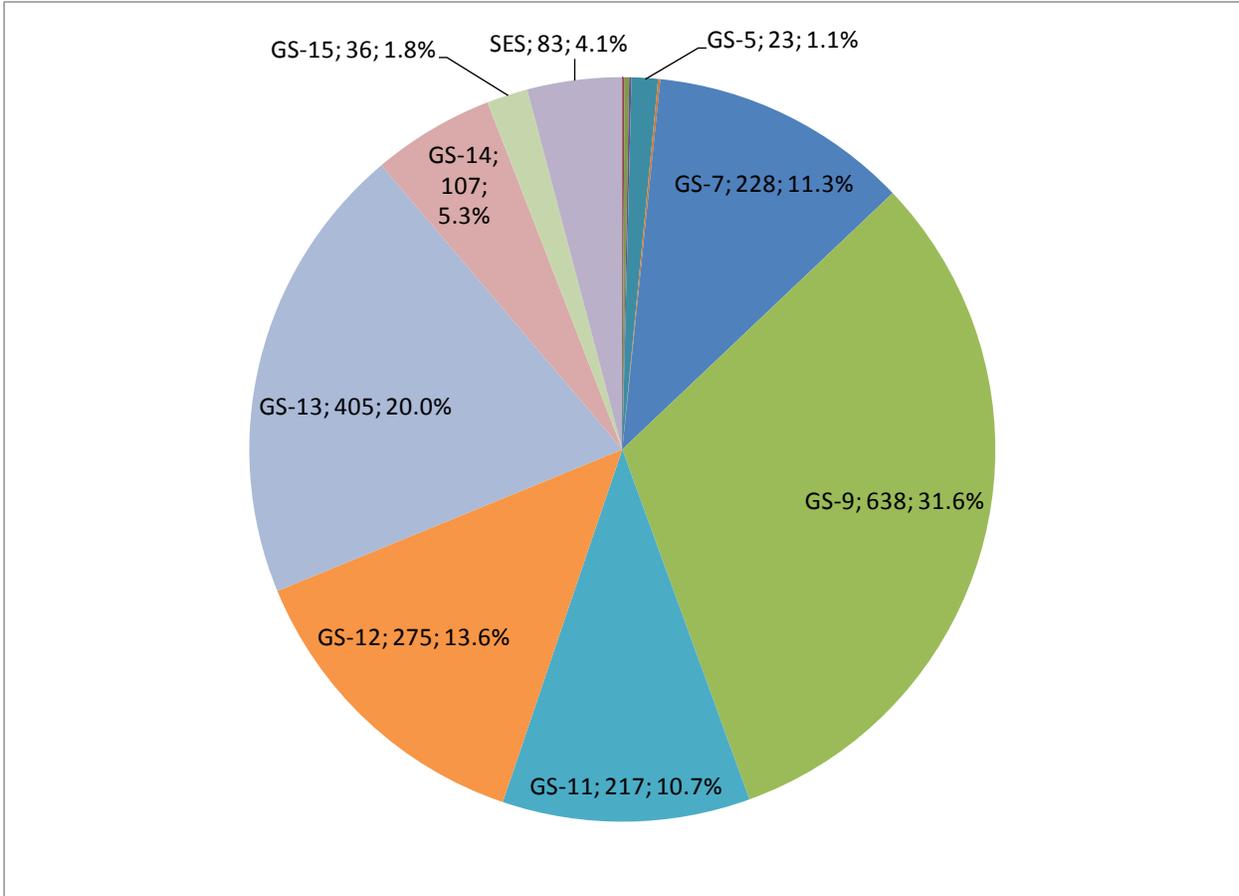


Figure 1. Distribution of Hires by Grade Level.
Sector labels: Grade Level, Number Hired during FY 2006 – FY 2010, and Percentage of Total Hires during FY 2006 – FY 2010, respectively (Sectors less than 1% not labeled).

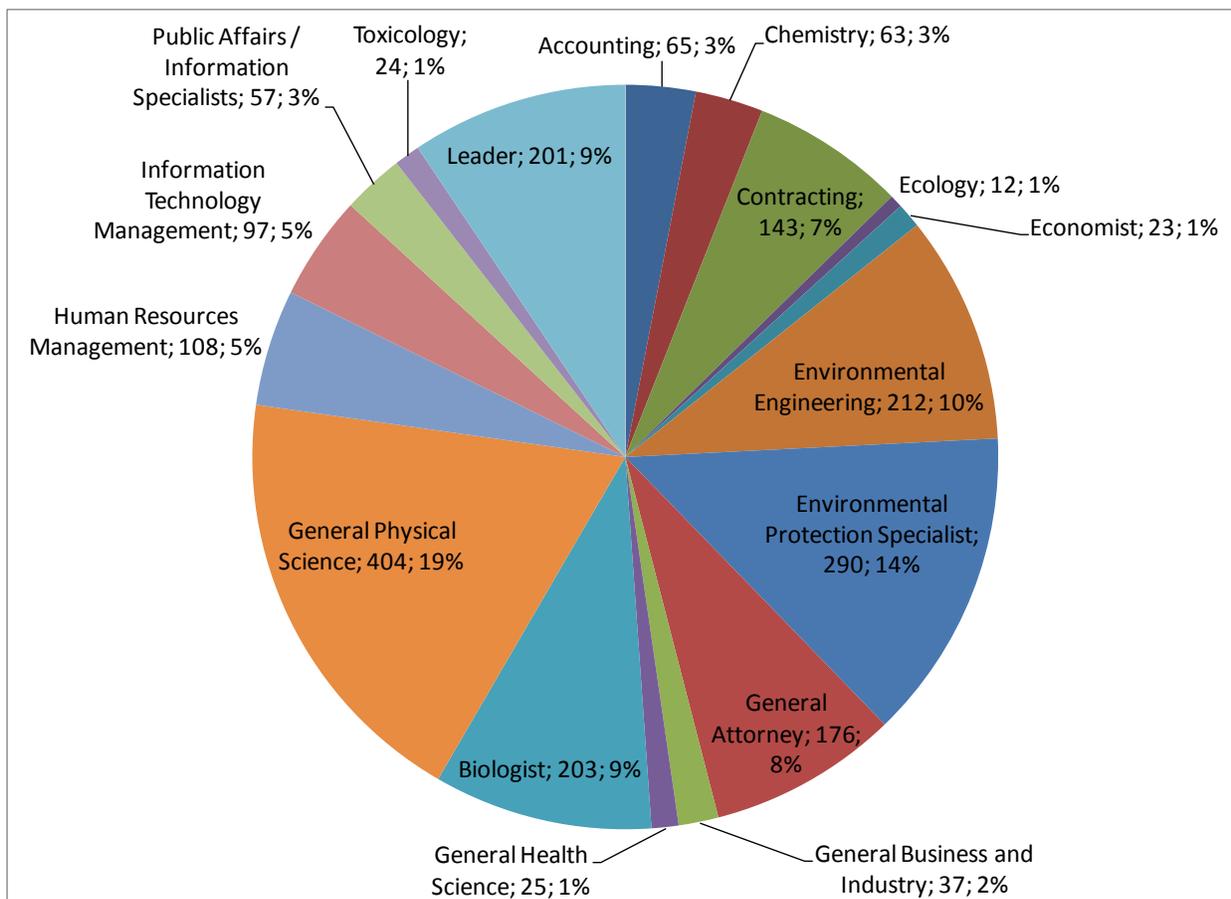


Figure 2. Distribution of Hires by MCO for FY 2006 – FY 2010. Sector labels: MCO, Number Hired during FY 2006 – FY 2010, and Percentage of Total Hires during FY 2006–FY 2010, respectively (Sectors less than 1% not labeled).

The list below is a summary of the scientific and technical competencies that NACEPT believes will be needed to meet tomorrow’s challenges. NACEPT’s first Advice Letter on workforce planning highlighted these increasingly important competencies and recommended that several new occupations be added to EPA’s list of MCOs in order to develop them within the Agency. Some of these are areas where the Agency may have the most difficulty finding available graduates. In some cases, such as Business and Finance and in leading edge areas of technological change, EPA will be in strong competition with the private sector for graduates. In other cases, such as Trans-Disciplinary Systems Thinking and Partnership Development, there are few educational institutions that provide appropriate training. As a result, developing these competencies will require special attention and effort.

Business and Finance – If the Agency is going to put more emphasis on supporting innovation in clean technology or minimizing environmental impacts of emerging technologies, it needs people with MBAs or equivalent experience on the front lines—people who can speak the language of business and are familiar with finance and venture capital.

Social, Behavioral and Decision Sciences – Improving the Agency’s capability in areas such as promoting sustainable individual and collective behavior or determining an equitable distribution of risks, costs and benefits requires a broad range of knowledge from the social, behavioral and decision sciences.

Trans-Disciplinary Systems Thinking – Dealing with big cross-cutting problems requires thinking that transcends individual media, knowledge domains and government agencies. People capable of this kind of thinking may often be cross-trained in more than one field and will have the ability to collaborate effectively and work across disciplines.

Computer Science and Information Technology – IT is an area of competence that should be viewed more broadly than as a tool for program and management support. It encompasses everything from environmental sensor systems to environmental simulations, visualization technology and other graphic advances to make information more accessible to the public and IT aspects of emerging clean technology.

Environmental Design – This encompasses a variety of professions dealing with the built environment including environmentally oriented (green) architects, landscape architects, ecological designers, planners, interior designers and facility managers.

Statistical Analysis – Advanced statistical analysis will be needed to deal successfully with big crosscutting problems, develop rigorous approaches to sustainability and support the widespread deployment of advanced sensor technology.

Partnership Development – The role of spanning organizational boundaries to develop partnerships with other public, private and nonprofit organizations will become more central as the Agency focuses more on leveraging limited resources, encouraging technological innovation, dealing with climate change, helping industry “design for the environment,” utilizing advanced sensor technology, and other actions likely over the next decade.

Public Outreach – This role will become a major focus of effort as the Agency engages more fully with climate change and other big cross-cutting problems, attends more to environmental justice issues, and works to promote more sustainable individual and collective behavior.

Global Perspective – Pollution is increasingly carried from other nations into the U.S. by winds and water and cannot be eliminated without international cooperation. The most challenging cross cutting environmental issues that loom ahead such as climate change, water resource sustainability, ecosystem decline, and ocean health are all global issues requiring global solutions.

Recruitment Strategies and Hiring Processes:

In this section, we will address issues in the hiring process itself that may impede the Agency from achieving its goals. NACEPT members reviewed recruitment programs described in the EPA's 2010 Human Capital Management Report, as well as survey data on new hire satisfaction and management hiring satisfaction. NACEPT members also reviewed data and comments from two outside sources that supplement information provided by EPA:

- 2010 *Best Places to Work* Rankings conducted by the Partnership for Public Service and American University's Institute for the Study of Public Policy Implementation that help measure employee satisfaction and commitment <http://bestplacestowork.org/BPTW/rankings>
- An informal survey of environmental professionals with masters' degrees from Yale University and other programs who have Agency experience.

EPA has centralized its recruiting process into three shared service centers (SSC) across the country. The advantage of this model is cross-fertilization of recruitment efforts. When each SSC undertakes a recruitment activity, they include all job positions across the Agency, both regional and headquarters.

SSC staff monitor the job announcement and application process, and they screen candidates for qualifications pertaining to meeting required skill sets. Based on scores assigned at this screening, only the highest quality candidates are referred to the requesting programs offices and regions. Program and regional managers are solely responsible for interviewing, if needed, and hiring from this pool of top candidates after which the SSC assists successful candidates with employee onboarding.

Although this model maximizes outreach for all positions open to external hires, NACEPT views several opportunities for more effective communications between SSC and the program and regional offices during the hiring process: First, the SSC should disclose the category rating scores for applicants to the hiring managers. For example, if among other criteria, applications are screened at a Grade Point Average, the SSC should inform the hiring manager about applicants with lower GPAs. Such disclosures create opportunities for post-hoc analysis, feedback and continuous, joint development of appropriate category rating criteria to ensure that qualified candidates are not inadvertently screened out. Second, the SSC should be available during the interview as an information resource to the candidate and hiring office on non-technical matters such as salary and benefits negotiations. This advances continuity in the hiring process and facilitates feedback between the hiring office and recruiters on lessons learned during candidate interviews.

The management hiring satisfaction survey evaluates how satisfied a manager was with the hiring process and support provided by Human Resources. Results for FY 2010 indicate that EPA ratings correlate with government-wide ratings.

Actual outreach efforts may have declined as EPA faces budget constraints. Only 28% of recent hires indicated that they found their job opportunity with EPA as a result of a recruitment

outreach. This suggests a potential opportunity for increasing the effectiveness of EPA's recruitment strategies.

The Environmental Careers Program (ECP) has been a key recruitment program. The ECP provides a two-year internship for entry-level candidates. Significantly, 100% of the FY 2010 ECP class were in MCO positions, and this program has a retention rate of 86.5%. This appears to be a highly successful tool for attracting entry-level MCO talent. The class size has decreased by over 60% since 2004, however, which suggests that this key recruitment tool might be more fully utilized by EPA.

The anecdotal survey of recent graduates provides additional informal results. The responses reinforce some of the themes that have emerged through review of EPA's internal analyses and surveys. Attracting and retaining masters' students is apparently not a problem; in fact "getting into EPA" is viewed as highly desirable due to the strong identity with the Agency's mission. There is a strong belief that an individual can be creative and "make a difference."

From the survey of recent graduate students mentioned previously, there appear to be significant barriers for Fellows and those without federal status to learn about and apply for many positions. The respondents described the overall application and hiring process as overly long and tedious. Other hurdles related to the paperwork for USAJOBS, including making sure that certain key words are hit. A manager at a regional office notes that masters' level applicants applying for GS-9 jobs with their experience and education sometimes displace those with undergraduate degrees applying at the GS-7 level.

The respondents' feedback aligns with EPA's own analysis of its hiring process compared to the Office of Personnel Management (OPM) standard. OPM targets an 80-day end-to-end hiring process. In 2010, only 15% of new hires met the 80-day target. EPA's average time-to-hire in 2010 was double the OPM target at slightly more than 161 days. The increased time-to-hire for SES positions from 59 days in 2009 to approximately 84 days in 2010 raises concern. EPA targets a 58-day time-to-hire window for SES positions. Given the potential for increasing attrition at SES positions, if this trend were to continue, it would exacerbate gaps in key leadership positions.

There are many good reasons that may cause EPA's hiring process to exceed the OPM standard. For example, the OPM standard does not include time to complete a security check, and EPA counts all of the days in the process including time allowances for personal reasons, which some other agencies may not be counting. Nonetheless, EPA should set more aggressive goals to reduce this hiring timeframe. Especially as the economy improves, potential candidates seeking jobs may simply get snatched up by other entities before EPA can complete its process. EPA has already begun the process to simplify the hiring process and reduce the average hiring cycle time by at least two weeks in response to the President's May 2010 directive to streamline federal hiring. That being recognized, more streamlining by EPA is recommended.

There may also be important opportunities for EPA to improve and expand its electronic hiring processes. As more federal agencies turn to the internet and other automated, electronic systems to streamline their outreach, recruitment and hiring processes, challenges are emerging. Though

not unique to EPA, these challenges should significantly concern the Agency and prospective applicants. USAJOBS is the U.S. government's official one-stop, internet-based source for employment information and job opportunities in the federal civil service. It is operated by the Office of Personnel Management. USAJOBS directs all applications for posted job openings to the respective agency's talent management systems, including EPA's *EZhire* system.

Anecdotal surveys indicate that prospective job applicants face difficulties when using USAJOBS. First and foremost, the operating protocol tends to reward applicants who have time available to scan new job postings each morning and apply right away, which may be more difficult for already-employed people looking to move laterally to EPA. Second, there appear to be some impediments with the USAJOBS website design, including: (1) Finding the exact keywords for job searches; (2) Completing lengthy questionnaires for each job application; (3) Re-entering similar information for every application submittal; (4) Uploading resumes and documents formatted with different word processing software; and (5) Confirming successful application submittal.

Some of these issues are being addressed by ongoing government hiring reforms. According to OPM, more than 90 percent of positions are now filled based on resumes and cover letters instead of knowledge, skills and abilities questionnaires. OPM also requires that USAJOBS provides applicants with progress notification while filling out an application and e-mail confirmation afterwards. EPA staff indicate that a major USAJOBS upgrade scheduled for Fall 2011 will provide additional features and enhanced capabilities. NACEPT commends these efforts.

Several EPA staff have indicated the need for the Agency to enhance its electronic applicant tracking systems. At present, very little applicant data are retained after selected candidates are referred to the hiring program and regional offices for further consideration. As a result, staff cannot retrospectively assess whether or not the Agency is recruiting and hiring the best possible candidates. Recruiters should be able to review applications disqualified because of incomplete information or errors in submittal to determine if better qualified candidates would otherwise have been considered. Lessons learned from such post-hoc evaluations would help identify and rectify electronic system deficiencies to ensure more diverse and technically competent applicant pools. NACEPT recommends periodic review of EPA's electronic hiring systems and continuous improvement by providing user-friendly interfaces and context-sensitive help tools to minimize errors in application submittal. Furthermore, applicant tracking data should be accessible to all levels of head office and regional office management.

In sum, although the Agency's hiring process is cumbersome, the EPA is nonetheless able to attract talent necessary to fill its needs. That does not mean, however, that the situation is desirable; improvements are possible and should be considered. As the Agency prepares to address complex environmental challenges, it must constantly ensure that it is attracting new employees with the needed technical expertise and interdisciplinary skills.

In the third advisory letter, we will more fully discuss issues associated with targeted recruitment to increase diversity at EPA.

Retention – Information on Job Experiences Affecting Attrition at EPA:

NACEPT also evaluated whether there were retention issues, particularly in mid- and senior-level managers that could exacerbate attrition expected from normal retirement trends. Overall, NACEPT found that employees are very satisfied with their careers at EPA, particularly because they support and believe in the Agency's mission. EPA can build on this strength both in retaining current employees and attracting external mid- and senior-level manager hires.

In general, current attrition rates at EPA are not a significant cause for concern. In 2010, the attrition rate fell to 4.1%, from 5.6% in 2008. Over the past five years, the attrition rate has averaged 5%. Organizational norms vary, but 5% compares favorably to the targeted voluntary departure rate of similarly-sized private sector organizations.

The 2010 Federal Employee Viewpoint Survey, issued by the Office of Personnel Management, indicates that, generally, attrition is not caused by people's dissatisfaction with their work at EPA. There is a strong personal sense of commitment, and EPA employees indicate they are willing to go the extra mile to get the job done and are seeking to improve their abilities. There are two cautionary notes, however, that warrant attention:

First, the attrition rate in SES employees is higher than the Agency average, at 8.4% in 2010. This reflects both the aging leadership core at EPA and the high number of retiree eligible SES employees. This issue will be discussed in more detail in our third Advice Letter, which will address topic #3 (“Strategies to attract and retain superior executive leadership talent”).

Second, this current low rate of attrition is likely motivated, in part, by the current economic recession. EPA may face higher rates of attrition as the economy recovers and some eligible employees elect to take retirement or seek employment elsewhere as jobs rebound in the private sector. 18% of the current population is retiree eligible now, and 25% will be eligible for retirement by 2012. Most significantly, 68% of the SES corps will be eligible to retire by 2013, creating a concern about loss of leadership and organization transition, skills transfer and achieving a One EPA culture.

EPA's best tool for retaining talent is maintaining the strong sense of purpose and importance that employees feel for the Agency's mission. The 2010 Federal Employee Viewpoint Survey results for EPA show that employees believe the work they do is important, and they feel very aligned with accomplishing the Agency's mission; this is a significant motivator for them. http://www.fedview.opm.gov/2010FILES/2010_Report_by_Agency_pt1.pdf This strong sense of purpose is an important positive factor for employees considering retirement or attrition for some other reason. EPA has found that many employees eligible for retirement do not, in fact, elect to retire because they feel highly satisfied with their careers. Strong identity with the Agency's mission is an important tool for EPA to build upon in addressing attrition concerns.

Based on NACEPT discussions with EPA staff, a review of current workforce articles and our own outside survey data, some of the reasons for voluntary employee departures include:

- Difficulty navigating the Agency's bureaucracy

- Strained relationship between line managers and subordinates
- Inability to express creativity when developing or implementing work products
- Lack of recognition for work product
- Lack of mentorship and leadership from SES

The key first step in addressing concerns about employee retention is maintaining the personal sense of self-worth and job satisfaction that people bring to the job. These are key reasons for retiree eligible employees to defer retirement and for satisfied employees to not seek employment elsewhere.

The 2010 Federal Employee Viewpoint Survey revealed a higher than government average amount of employee frustration that management does not address the poor performance of other employees. The EPA responses were more significant than the overall government responses in this category – only 26% believe needed steps are taken to deal with a poor performer. Employees who feel that colleagues are not carrying their weight may become pessimistic about their work team and seek employment elsewhere.

Additionally, while EPA employees indicate a fairly high level of immediate job satisfaction, employees indicated a pretty low confidence that they will have the opportunity to get a better job or that good performance will correspond to compensation. Only 38% of EPA employees believe they will have the opportunity to get a better job, and only 22% of EPA employees believe pay raises are based on employee performance. EPA employees ranked significantly below the government average in both of these areas, which is striking given the high sense of alignment that employees have with the Agency's mission.

EPA has an impressive number of programs in place to address employee development, satisfaction and retention. However, looking behind the programs, the number of employees who are able to participate in these programs is relatively small. For example, the Candidate Development Program (CDP), which targets SES candidates, has been able to process 18 employees. Projected gaps in the SES corps are closer to 50-100 vacancies over the next 2-3 years. The CDP may be a good retention and leadership development tool, but it is not robust enough to fill the looming gaps.

An analysis of attrition statistics indicates that attrition occurs across all diversity categories. However, there seems to be slightly higher attrition for females versus males. This is an area that EPA should research further. There may be a correlation with the low ranking that EPA received in the 2010 Federal Employee Viewpoint Survey for Work/Life programs focused on child care and elder care. While EPA ranked very high on its Work/Life programs with respect to alternative work schedules and flex schedules (84% ranked it as a positive), only 24% and 27% ranked elder care and child care, respectively, as a positive. Culturally, there may also be expectations for females that differ from males when it comes to caring for children, parents and grandparents.

While the *Best Places to Work* report draws from questions in the Employee Viewpoint Survey and selects just a few questions to focus on, it is a tool that is used by entry- and mid-level potential hires so its importance in the hiring marketplace is relevant. According to the *Best*

Places to Work report, EPA's overall ranking was #11 out of 32 comparable "large" federal agencies with > 2000 employees. This is good, but there is some room for improvement.

For EPA's program offices, 9 offices were ranked at 60.7 - 71.8 on 0 - 100 scales. The Office of Water ranking the highest. EPA Regions received better overall measures with a low/high range of 65.3 - 78.8. Region 1 (Boston) and Region 9 (San Francisco) ranked highest and, in fact, were among the top 10 of all agency subunits. For this data set, staff includes employees who do not have supervisory responsibilities whereas managers include senior leaders, managers, or supervisors. Given the concerns over EPA retirements, it is interesting to note that for the fifth time in a row the survey found "effective leadership, and in particular, senior leadership" to be the primary driver in shaping how employees view their workplace across the federal agencies.

EPA may be especially challenged over the generation ahead to attract and retain people who are at the leading edge of technological innovation. The Agency's leadership understands that converging technical revolutions are underway in areas such as computing and communications, renewable energy, nanotechnology and synthetic biology. These developments will create new environmental problems, but they are also creating a unique opportunity to shape a more advanced technological infrastructure that is more economically competitive and far less harmful to the environment.

This understanding is leading to efforts within the Agency to take on a larger role in supporting research, development and commercialization of next-generation, environmentally advanced technologies. Early efforts are focusing on water technology innovation. To play this role effectively, EPA will increasingly need to attract people who understand leading-edge developments in relevant areas of technology. However, people with these qualifications also will be highly sought after by the private sector and able to command high salaries. To be competitive, EPA must compete even more strongly than it does today on intangible qualities such as the importance of its mission and the quality of its work environment.

Summary Recommendations for Hiring, Recruiting and Retaining MCO Talent:

1. Focus Efforts on Further Simplifying the Hiring Process. While the current hiring process is not impeding EPA from successfully filling its MCO positions, as the economy improves, there will be more competition for those same employees and EPA could position itself better as the employer of choice with a faster, more streamlined process. EPA should explore more efficient and effective use of the internet and automated, electronic systems (without compromising opportunities for equal access for minorities, low-income communities and persons with disabilities).

2. Reinvigorate the Environmental Careers Program. EPA's historical success with this program contrasted with diminishing utilization of the program presents an opportunity, particularly for developing candidates to fill MCO and MCC needs in light of the potential for increasing attrition due to retirements and departures when the economy improves.

3. Update Descriptions of EPA. To help meet the growing need to recruit people on the leading edge of technological change in different areas, the Agency should consider giving more emphasis in its descriptive materials on how efforts to help shape a more advanced 21st century technological infrastructure is both more economically competitive and less environmentally harmful.

4. Consider the Emerging Leaders Network (ELN) Employee Retention Briefing Paper Recommendations for Agency-Wide Implementation. The ELN was founded about five years ago to help build the capacity and reinforce the passion of EPA's emerging leaders to protect human health and the environment. The network organizes seminars, professional skills workshops, round-table discussions, community service programs and social events to promote effective leadership and interdisciplinary teamwork. Regional chapters have been launched in Regions 1, 2, 3, 5, 8, 9, and 10 and membership currently exceeds 1,000 employees.

The ELN Chapter in the EPA Region 8 (Denver) office recently developed a briefing paper that tackled the issue of employee retention. The recommendations include: (1) Encouraging a culture of competence, high performance and pride in public service; and (2) Facilitating knowledge transfer between career employees and newer employees by increasing opportunities for cross-generational sharing and cross-organizational exchange of expertise and knowledge.

5. Complete a Workload Analysis and Utilize Findings to Allocate Human Capital Efficiently. An audit performed by the EPA Office of Inspector General on June 29, 2010 indicated that the Agency has not completed a workload analysis; therefore, it is unable to demonstrate whether or not it has the staff resources needed to accomplish its mission. Completion of a workload study could help the Agency to: (1) Identify the number of people needed to complete the tasks in the Agency; and (2) Ensure there is equity with staff work load.

6. Conduct "Stay" and "Exit" Interviews to Solicit Input from Existing or Departing Staff and Proactively Use the Results. "Stay" interviews provide existing employees with a venue for expressing their likes and dislikes about their work environment. Exit interviews are valuable tools for determining the reasons why an employee has decided to leave the Agency. Both of these assessment methods can provide valuable insights into the Agency's culture, functionalities and opportunities to do better at retaining top talent (Partnership for Public Service & Booz Allen Hamilton, 2011). As mentioned above, the first step in addressing concerns about employee retention is to maintain the personal sense of self-worth and job satisfaction that people bring to the job.

7. Understand Better Who Is Leaving EPA and Why. EPA should create an attrition profile and dimension by age, gender, race, education level, job title and geography to more fully understand "who" is leaving the Agency. The EPA exit interview process should address the "why" by specifically asking employees their reasons for leaving the Agency: if to take another position, is it with another government agency, an NGO or the private sector? This will help answer who is leaving and why, and focus EPA's retention programs on the reasons more likely to cause employees to depart.

8. Measure the Performance of Existing Retention Programs. EPA has multiple programs aimed at retaining and developing top talent within the Agency – for example, the Leadership Institute, Leadership and Professional Development and Rotation Program, Quality of Work Life Campaign and Telework Program, and Labor and Employee Relations Program. We recommend that Agency staff track key performance indicators such as: the number of program participants; program completion rates; and program surveys or evaluation results or other tools which can be used to measure program success. Maintaining this type of data is important in order for the Agency to determine the efficacy of existing retention programs.

CONCLUSION

Many of the recommendations to foster a One EPA culture and the recommendations focused on better enabling EPA to recruit, hire and retain the technical and science talent that it will need in the coming years are complementary and synergistic for achieving both outcomes. Building on the strength of employees' positive identification with EPA's mission and energizing that important competitive advantage with the One EPA cultural strategies will significantly enhance the employee value proposition to better enable EPA to attract and retain key employees and mitigate concerns about potential future attrition.

We express our appreciation to the following EPA managers and members of their staff who provided valuable suggestions and support in developing this Advice Letter: Dr. Paul Anastas, Ms. Nanci Gelb, Mr. Raul Soto, Mr. James Newsom, and Mr. Rafael Deleon.

We appreciate the opportunity to work on this important topic and offer any additional advice that you may require in the future.

Sincerely,

/Signed/

Dr. James H. Johnson, Jr.
Chair

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