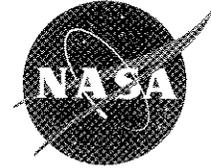


National Aeronautics and Space Administration
Headquarters
Washington, DC 20546-0001



December 11, 2009

Reply to Attn of: Office of the Chief Engineer

TO: Distribution

FROM: NASA Chief Engineer

SUBJECT: Call for Systems Engineering Leadership Development Program (SELDP) Participants

NASA's vision and mission necessitate that its workforce is ready and able to lead the world in space exploration, scientific discovery, technology development, and leadership excellence. Systems Engineering has been identified by NASA leadership as a critical core competency in enabling current and future mission success. The Office of the Chief Engineer (OCE) has responsibility for implementing an effective Systems Engineering strategy and aligning and integrating technical processes, tools, methods and workforce planning. Included in workforce planning is the Agency-wide Systems Engineering Leadership Development Program (SELDP).

The SELDP provides leadership development and technical training in Systems Engineering. Participants in this program engage in a number of learning experiences tailored to their development needs, which will be determined by individual gap analysis. SELDP provides a balance of two critical learning components defined in the Art and Science of Systems Engineering (<http://www.nasa.gov/offices/oce/appel/seldp/index.html>, right sidebar menu):

- Leadership Skills Development accomplished through the use of assessments, coaching, leadership workshops and skills training; and
- Technical Leadership Broadening accomplished through meaningful, challenging, hands-on assignments and mentoring.

The focus of this learning is on broadening the participant's technical understanding of NASA; therefore, SELDP developmental assignments must be conducted at a different NASA Center. Although, the SELDP allows for developmental assignments as short as six months, NASA SE Leadership has determined that the longer the SE developmental assignment, the more effective the participant becomes in leading complex SE projects and programs, and therefore, 12 months assignments are highly encouraged.

SELDP developmental assignments are identified by the SELDP Advocates who conduct a gap analysis of participant learning needs against the available assignments.

While participants do not select their assignment, the Advocates work very closely with the participants to identify their experiences, learning gaps, future focus, and preferences. All of which are taken in consideration as these assignments are made. Full program details are available in the SELDP Program Plan at <http://www.nasa.gov/offices/oce/appel/seldp/index.html>, right sidebar menu.

Critical to this process is ensuring the selection of the high potential participants. Participant selection will focus on identifying individuals who have proven technical/discipline capability, and who have demonstrated key Systems Engineering leadership capabilities and behaviors listed in Attachment A, SELDP Selection Criteria.

Selection will also focus on choosing individuals who are expected to engage in more complex and challenging Systems Engineering efforts within the next two years, versus employees who are currently available.

Centers are requested to appoint a point of contact to coordinate the announcement and selection of nominees with the Engineering, Safety and Mission Assurance (S&MA), Program and Project Management, Human Resources and other appropriate organizations at their center. Centers are requested to provide the name and contact information of their point of contact to Chris Williams at Christine.r.williams-1@nasa.gov by Friday, January 8, 2010.

Individuals selected by the Center must be nominated by their Center Director and Center Director of Engineering for this program. Nominees must meet the following criteria:

- Grade: Meet the grade requirement of GS-13 through GS-15 for NASA employees and Senior Systems Engineers for the Jet Propulsion Laboratory.
- Leadership Experience: Have demonstrated the leadership behaviors and aptitudes NASA identifies as critical to becoming a Systems Engineering Leader listed in Attachment A, SELDP Selection Criteria.
- Technical Experience: Have demonstrated technical/discipline capabilities and have experience applying SE principles on one or more projects or programs. Is an employee who understands and has exposure to a breadth of SE competencies as defined by APPEL, and is at least APPEL Level 2 (Apply: Subsystem Leads). (See NASA Systems Engineering Competencies at http://www.nasa.gov/offices/oce/appel/pm-development/pm_se_competency_framework.html.)
- Safety and Mission Assurance (S&MA) Engineers are also encouraged to apply to this program. SMA applicants can substitute experience applying SMA principles to a project or program.
- Education and Training: Have the required education, a bachelor's in engineering or AST equivalent. Optimally nominees have taken any recommended SE APPEL

- Training including: Foundations of Aerospace at NASA, Project Management and Systems Engineering, and Fundamentals of Systems Engineering or equivalent courses. (See <http://www.nasa.gov/offices/oce/appel/curriculum/curriculum.html>.)
- Timing: Have the top level Center engineering leadership support needed to be successful in the program, and are selected at the right time in their career when this learning will have the greatest impact on the Center and their career. Nominees should also be selected at a time when participants can fully participate in year-long program activities including:
 - when the individual can be fully released from their current work assignments, and when their family situation can support a move away from their geographic area for 6 to 12 months; and
 - when individuals can be placed in the right next challenge upon completing the program to ensure maximum transfer of learning and return on investment.

Centers must inform all candidates that they need to be available on the following dates:

- **March 23, 2010** **Interviews at HQ**
- **June 7-11, 2010** **Orientation at Bolger Center, Potomac MD**

This information should also be included in the Center Call for SELDP.

Note: Centers pay travel to and from these events.

In addition, in order to be selected for the program, there must be an appropriate developmental assignment available to meet the participant's need. As each SELDP participant will be matched with a challenging developmental assignment, we are also asking Centers to identify potential Systems Engineering and S&MA assignments.

Each potential assignment at the Center must be described on NASA Form 1781A, which can be downloaded from <http://server-mpo.arc.nasa.gov/Services/NEFS/>, and submitted to the Center Advocate, listed at <http://www.nasa.gov/offices/oce/appel/seldp/network/index.html>. Assignments should identify only the key competencies that will be developed as part of this developmental assignment. Only 10 competencies can be entered. Along with these assignments the Center must have the appropriate resources and structure to support the participant's learning throughout the year.

The Office of the Chief Engineer will fund all travel (extended TDY) and training associated with this program, with the exception of travel required as part of the developmental assignment, which is funded by the program or project on which the participant is working. **The participant's home Center will continue to be responsible for funding the participant's salary, in addition to, travel to and from Headquarters to participate in the selection interview and Orientation.** However, JPL will be responsible for funding all costs associated with their employee's participation in the program.

Also, NASA employees on assignment at JPL will have the travel associated with their developmental assignments covered by OCE.

Nominations for the SELDP must be received by the Office of the Chief Engineer by Monday, February 1, 2010. Nomination packages must include 1) an SELDP Nomination Form 1781 for each nominee; NASA Form 1781 (Dec 09) can be downloaded from the NASA Forms site at <http://server-mpo.arc.nasa.gov/Services/NEFS/>; and 2) an endorsement from the Center Director and Engineering Director. The endorsement letter must include an indication of the nominee's leadership capabilities and needs. It should specifically address:

- Judgment, decision making and problem solving capabilities
- Potential working on large, complex systems – engaging in out of the box thinking
- Communication skills
- Understanding of NASA's strategic vision and ability to think strategically
- Ability to build trust, and work collaboratively with others (employees, teams, etc.)
- Openness to self-reflection, learning and change

Each nominee must coordinate with their Center Advocate to complete the on-line competency.

Candidates should be reminded that their application needs to be concise. No attachments will be accepted to the nomination form and that the minimum font size allowable is 11. Nomination forms not meeting these guidelines will be returned and if time does not allow for submitting a revision, the applicant will not be considered for the 2010-2011 SELDP.

The 2010-2011 SELDP Selection Schedule is enclosed as Attachment B.

Please address questions concerning this announcement to Chris Williams, Christine.r.williams-1@nasa.gov or 202-358-2146.



Michael Ryschkewitsch

2 Enclosures

Distribution:

Administrator/Mr. Bolden
NASA Mission Directorates
NASA Center Directors
HQ/Assistant Administrator for Human Capital Management/Ms. Dawsey
NASA Engineering Management Board

NASA Safety and Mission Assurance Directors
SELDP Advocates
NASA Human Resource Directors
NASA Training Officers
NASA APPEL Center Contacts

SELDP Selection Criteria

Candidates for SELDP must be GS 13, 14 or 15 civil service employees, or a Senior Systems Engineer at JPL, and possess an Engineering Bachelors Degree or AST Equivalent

Application Ratings: Assessing the Science of Systems Engineering

The following rating and ranking criteria will be used by the SELDP Selection Panel to rate and rank nominee applications:

Rating Factor	Max Points	Description
Experience (Application Question 11)	40	<p>Has the nominee had the requisite experience in complexity and number of years to adequately prepare him/her to be successful in the SELDP? Has the nominee proven to be able to effectively translate the opportunities he/she has been provided into measurable results for the Agency? Nominees will be rated on:</p> <ul style="list-style-type: none"> o Relevant Past Experience: Type & Number of Years of demonstrated SE discipline knowledge and practical experience within area of expertise. SMA applicants can substitute type and number of years of demonstrated SMA discipline knowledge and practical experience applying to programs and projects. o Participated in, or have an understanding and exposure to, phases of project life cycle development o Discipline and/or Competency o Major Accomplishments (Results Achieved) Including Awards Received
Developmental Preparation (Application Question 12)	30	<p>Is the nominee prepared to make maximum use of SELDP and does he/she have the requisite training and development necessary to be successful in the program? Is this the right program for this nominee at this time in his/her career? Nominees will be rated on:</p> <ul style="list-style-type: none"> o Degree(s) and certificate(s) obtained o APPEL and other relevant SE training completed – <u>must be noted in application</u> o Other professional development o Leadership development including Agency-wide courses as applicable
Senior Management Endorsement and Statement of Need	25	<p>Does the Center consider the nominee an individual who is ready for the next level of SE challenge and complexity? Does the Center have a clear strategy for this individual that will effectively use the knowledge, skills and abilities gained in SELDP to support the achievement of the Center goals? Is there a good plan to enhance NASA's return-on investment? Nominees will be rated on:</p>

Attachment A

<p>(Application Questions 13 and 15)</p>		<ul style="list-style-type: none"> ○ Center's overall endorsement and assessment of the nominee's SE leadership capabilities ○ Alignment of individual development needs with Agency/Center program needs ○ Reentry strategy (How quickly can the learning be applied?)
<p>Discretionary</p>	<p>5</p>	<p>At the discretion of the SELDP Selection Panel member, up to 5 points can be added to the above factors, based on the information provided. This allows the panel member the latitude to recognize any exceptional strength, and/or to express a clear preference for one candidate over the others, despite the fact that the numerical weighting to that point may have been more or less equal.</p>
<p>Maximum Points Awarded</p>	<p>100</p>	

Interview Ratings: Assessing the Art of Systems Engineering

Nominees whose applications are highly ranked will be interviewed to determine if they exhibit the Systems engineering leadership behaviors and aptitudes necessary to becoming an expert in the field. The following criteria will be used by the SELDP Selection Panel to assess nominees:

Rating Factor	Max Points	Description
Leadership Skills	25	<p>Nominee:</p> <ul style="list-style-type: none"> • Appreciates/Recognizes Others • Is Able to Build Team Cohesion • Understands the Human Dynamics of a Team • Can Create Vision and Direction and Ensure System Integrity • Possess Influencing Skills • Sees Situations Objectively • Coaches and Mentors • Delegates • Ensures Resources are Available
Attitudes and Attributes	25	<p>Nominee:</p> <ul style="list-style-type: none"> • Remains Inquisitive and Curious • Seeks Information and Uses the Art of Questioning • Advances Ideas • Gains Respect Credibility, and Trust • Possesses Self-Confidence • Has a Comprehensive View • Possesses a Positive Attitude and Dedication to Mission Success • Is Aware of Personal Limitations • Adapts to Change and Uncertainty • Uses Intuition/ Sensing • Is Able to Deal with Politics, Financial Issues, and Customer Needs
Communication	25	<p>Nominee Has the Ability to:</p> <ul style="list-style-type: none"> • Listens Effectively and Translates Information • Communicates Effectively Through Personal Interaction • Facilitates an Environment of Open and Honest Communication

Attachment A

<p>Problem Solving and Systems Thinking</p>	<p>25</p>	<ul style="list-style-type: none"> • Uses Visuals to Communicate Complex Interactions • Communicates Through Story Telling and Analogies • Is Comfortable with Making Decisions
		<p>Nominee:</p> <ul style="list-style-type: none"> • Identifies the Real Problem, Assimilates • Analyzes, and Synthesizes Data • Thinks Systemically • Has the Ability to Find Connections and Patterns Across the System • Sets Priorities • Keeps the Focus on Mission Requirements • Possesses Creativity and Problem Solving Abilities • Validates Facts, Information and Assumptions • Remains Open Minded and Objective • Draws on Past Experiences • Manages Risk
<p>Maximum Points Awarded</p>	<p>100</p>	

Attachment B

**Systems Engineering Leadership Development Program (SELDP)
2010-2011 Selection Process Schedule**

Target Date	Activity
December 2, 2009	EMB Approval Telecom
December 11, 2009	Call Letter Released
February 1, 2010	Nominations/Applications Due
February 3, 2010	Applications Sent to Selection Panel & Developmental Assignments Due
March 3, 2010	Ratings Due from Panel
March 8, 2010	Panel Decision Telecom & Candidates Invited to Interview
*March 23-24, 2010	Interview and Final Selection Panel Meeting Held at Headquarters *
March 24-25, 2010	Advocate Meeting at HQ
March 29, 2010	Selected Participants Notified
**June 7-11, 2010	Orientation

***Interviews will be held at NASA Headquarters on March 23. All nominees are requested to reserve this date for interview. Centers pay for travel to DC for interviews.**

****Mandatory for all 2010-2011 SELDP Participants to attend Orientation. Centers pay for travel to and from Orientation.**