NATIONAL PARK SERVICE

Cultural Resources Stewardship Training Needs Assessment

FINAL REPORT

HISTORICAL LANDSCAPE ARCHITECT

Grant-Kohrs National Historic Site (NHS), Deer Lodge, Montana.

Stephen T. Mather Training Center
National Park Service

Center For Recreation Resources Policy
George Mason University
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BACKGROUND

In 1993, the Government Performance and Results Act (GPRA, 1993) was passed and signed into law. This legislation mandated that the actions of federal agencies be guided through the establishment of concrete goals and measured by performance evaluation.

The following year, the National Leadership Council of the National Park Service (NPS), as its first formal action, approved and adopted the NPS Employee Training and Development Strategy. This Strategy, commensurate with the spirit of GPRA, implemented a competency-based approach to training for all employees Servicewide. Its stated mission is to provide for the professional growth and continuous learning of all NPS employees by providing them with a comprehensive, mission-focused training and development program (NPS, 1995).

Furthermore, the Government Education and Training Act (GETA), enacted in 1958, requires agencies to conduct training needs assessments in order to provide a realistic basis upon which to plan, program, and direct training and development activities toward the achievement of organizational and program goals. As a result, the NPS Stephen T. Mather Training Center entered into a cooperative agreement with the Center for Recreation Resources Policy at George Mason University in 1994 to conduct a training needs assessment for the Interpretation career field (Wright and Makay, 1995).

With the growing momentum of the Strategy, teams of employees and training managers, representing 17 different career fields, began the arduous task of compiling and documenting the "essential competencies" required to guide the professional development of NPS employees, in 225 occupational groups, for the next 10 years. The results of this effort are documented in the NPS Employee Training and Development Career Planning and Tracking Kit.

To begin establishing a baseline of data depicting needs and levels of current performance, the National Park Service, Stephen T. Mather Training Center, entered into an agreement with George Mason University, Center for Recreation Resources Policy, to conduct formal training needs assessments for employees in or associated with the Cultural Resources Stewardship Career Field.

The purpose of this report is to document the procedures and findings associated with the assessment of training needs for Historical Landscape Architects. More specifically, this study was designed to accomplish the following objectives:

1. To determine the perceptions of Historical Landscape Architects regarding the importance of each of the essential competencies outlined in the NPS Employee Training and Development Career Planning and Tracking Kit.

2. To determine the perceptions of Historical Landscape Architects regarding their level of preparedness to perform each essential competency.

3. To diagnostically assess the gaps in existing training given the importance assigned to competencies and the general level of preparedness to perform critical tasks.
4. To compare the perceptions of employees and their first-line supervisors regarding training needs.

METHODS

Study Population. Given the relatively small number of employees in the Cultural Resources Stewardship Career Field, particularly in some occupational fields (e.g., 15 Museum Conservators), a decision was made to include the total population of employees, rather than survey a proportional sample. Twenty three (23) Entry Level Historical Landscape Architects, sixteen (16) Developmental Level Historical Landscape Architects, and thirty-nine (39) Full Performance Level Historical Landscape Architects in NPS parks, offices, and centers were asked to participate in this study.

Development of the Survey Instrument. Essential competencies identified for Historical Landscape Architects were integrated into a mail survey instrument. These competencies, in addition to demographic data pertinent to National Park Service employees, formed the basis for the questionnaire. Respondents were asked to indicate their perceptions of how important essential competencies were to the performance of their present jobs (1 = Not Important, 7 = Extremely Important). Then, given the same list of competencies, they were asked to rate their preparation to perform those tasks (1 = Unprepared, 7 = Fully Competent). A copy of each survey instrument is included as Appendix A-1, A-3, and A-5.

Data Collection. Following standard procedures of social science and survey research, a cover letter, questionnaire, and self-addressed, business reply envelope were mailed to each of the Historical Landscape Architects in May 1999. They were asked to complete the questionnaire during their workday, as part of their official duties. Approximately four weeks later, those persons who had not responded to the initial mailing were mailed a follow up letter and questionnaire requesting that they complete the questionnaire and return it as soon as possible.

Study participants also were sent a separate questionnaire and cover letter and asked to give it to their first-line supervisor to complete and return. Because some supervisors were responsible for supervising more than one employee, the total population of supervisors is not known. Therefore, no response rate for supervisors will be reported. Data collected from supervisors are reported as an aggregate and used for comparative purposes only.

Response Rates. At the end of the data collection period, a total of 18 questionnaires for Entry Level Historical Landscape Architects, 13 questionnaires for Developmental Level Historical Landscape Architects, and 17 questionnaires for Full Performance Level Historical Landscape Architects had been returned. Unlike surveys of the general population, there were no questionnaires returned as "undeliverable." Therefore, the effective response rate for this study was as follows:

- Entry Level = 78%
- Developmental Level = 81%
- Full Performance Level = 43.5%
Data Analyses. Data were analyzed using the Statistical Package for the Social Sciences (SPSS), a popular software program utilized by social and behavioral scientists. Standard frequency distributions were computed for both the importance assigned to and ability to perform each of the essential competencies.

Moreover, these statistics were combined to identify "training gaps" through a simple Importance-Performance, or gap analysis. For example, competencies in which employees perceived themselves to be unprepared to perform can be viewed relative to their perceived importance to the employees' successful job performance. Competencies experiencing the largest "gaps" (i.e., Competency minus Importance) should receive greater emphasis when planning training. Treatment of the importance and competency (performance) data using Importance-Competency (I-C), or gap analysis, is similar to procedures reported first by Martilla and James (1977). The results are presented in the discussion, table, and figure below.

RESULTS AND DISCUSSION

HISTORICAL LANDSCAPE ARCHITECT – ENTRY LEVEL

Profile of Respondents. Slightly over half of the 17 respondents were women (56.3%). The average age of respondents was slightly more than 33 years of age. They had completed almost 19 years of formal education ($\bar{x} = 18.75$ years). See Appendix A-2 for information pertaining to academic degrees held by Entry Level Historical Landscape Architects.

While most of the respondents were White (87.5%), one reported being an American Indian or Alaska Native and another was Hispanic. Most held the rank of GS-9 (65%), but 21 percent were GS-11's and 14 percent were GS-7's. On average they had been employed by the National Park Service for 2.6 years, with slightly less than two years in their current positions ($\bar{x} = 1.9$ years).

Importance of Competencies. As can be seen in Table 1, respondents rated 10 different competencies as having the greatest importance to them in their current positions. They were:

(Q1) A degree in landscape architecture from a program accredited by the Landscape Architecture Accreditation Board, supplemented by a professional understanding of the National Park Service policies, objectives, and design criteria necessary for research, planning, design development, and construction documentation, including reports, plans, specifications, and cost estimates for cultural landscape preservation.

(Q2) Basic knowledge of the theories, principles, laws, practices, and techniques of landscape architecture, particularly as they apply to the preservation of cultural landscapes.

(Q6) Basic knowledge of federal cultural resource preservation legislation, policies, guidelines and standards, and procedures, particularly the National Historic Preservation Act, the Secretary of the Interior’s Standards and Guidelines for Archeology and Historic Preservation, and National Park Service Management Policies and guidelines.
(Q8) Basic knowledge of cultural landscape research, inventory, documentation, and analysis and evaluation methodologies and techniques.

(Q10) Ability to apply applicable criteria, standards, and guidelines to cultural landscape research, inventory, documentation, and analysis and evaluation.

(Q11) Ability to conduct, with technical supervision and oversight, historical research, field investigations, data analysis, and to prepare reports, plans, specifications, and cost estimates to support planning for cultural landscape preservation.

(Q18) Ability to work effectively with park operations responsible for cultural landscape management.

(Q30) Ability to articulate the role of cultural landscape preservation in the mission of the National Park Service verbally, graphically, and in writing.

(Q31) Ability to communicate research, treatment, maintenance, and management findings verbally, graphically, and in writing.

(Q32) Ability to use current computer software programs for written and graphic communication.

Each of these competencies received a mean importance rating of 6.0 or higher on the 7-point scale. Moreover, 34 of the 38 competencies posed to respondents were rated as 5.0 or higher. No competencies were rated less than 4.0.

Perceived Level of Competency. Respondents reported feeling relatively competent regarding only five of the 38 competencies, rating these items as 5.5 or higher on the 7-point scale. They were:

(Q2) Basic knowledge of the theories, principles, laws, practices, and techniques of landscape architecture, particularly as they apply to the preservation of cultural landscapes.

(Q8) Basic knowledge of cultural landscape research, inventory, documentation, and analysis and evaluation methodologies and techniques.

(Q30) Ability to articulate the role of cultural landscape preservation in the mission of the National Park Service verbally, graphically, and in writing.

(Q31) Ability to communicate research, treatment, maintenance, and management findings verbally, graphically, and in writing.

(Q34) Knowledge and understanding of the importance of public interpretation of cultural landscapes and the techniques for conveying cultural landscape information to the public.
Conversely, they rated an equal number (5) of items as areas where they did not perceived themselves to be highly competent. Each item below was rated as less than 4.0.

(Q13) Basic knowledge of natural resource policies, standards, and guidelines and the interrelationship of cultural and natural resources in the treatment, management, and maintenance of cultural landscapes.

(Q16) Basic knowledge of maintenance management practices and systems (e.g., NPS Maintenance Management System and the Inventory and Condition Assessment Program).

(Q26) Ability to apply and integrate, with technical supervision and oversight, the Section 106 compliance process in project management.

(Q29) Ability to assist in the management of contract and cooperative agreement work, such as tracking scopes of work, budgets, and technical review of products.

(Q38) Knowledge of NPS loss prevention guidelines and regulations.

Gaps in Cultural Resource Stewardship Training. When analyzed together, the relative ratings of importance and competency provide a diagnostic assessment of training “gaps” in this occupational group. Table 1 provides a ranking of essential competencies producing the largest “I-C gaps.” Thirteen competencies produced gaps in excess of 1.0. They were, in order of magnitude:

(Q26) Ability to apply and integrate, with technical supervision and oversight, the Section 106 compliance process in project management.

(Q16) Basic knowledge of maintenance management practices and systems (e.g., NPS Maintenance Management System and the Inventory and Condition Assessment Program).

(Q24) Basic knowledge of Section 106 laws, regulations, and procedures.

(Q13) Basic knowledge of natural resource policies, standards, and guidelines and the interrelationship of cultural and natural resources in the treatment, management, and maintenance of cultural landscapes.

(Q12) Basic knowledge of policies, standards, and guidelines related to the treatment of historic properties, particularly their application to cultural landscapes.

(Q14) Basic knowledge of policies, standards, and guidelines regarding planning, design, and construction projects.

(Q6) Basic knowledge of federal cultural resource preservation legislation, policies, guidelines and standards, and procedures, particularly the National Historic Preservation Act, the Secretary of the Interior’s Standards and Guidelines for Archeology and Historic Preservation, and National Park Service Management Policies and guidelines.
(Q17) Ability to apply, with technical supervision and oversight, policies, standards, and guidelines and prepare reports, plans, specifications, and cost estimates to support planning, treatment, and maintenance.

(Q11) Ability to conduct, with technical supervision and oversight, historical research, field investigations, data analysis, and to prepare reports, plans, specifications, and cost estimates to support planning for cultural landscape preservation.

(Q18) Ability to work effectively with park operations responsible for cultural landscape management.

(Q15) Basic knowledge of the integration of allied disciplines, such as architecture, archeology, and natural resources in prescribing treatment and management activities.

(Q29) Ability to assist in the management of contract and cooperative agreement work, such as tracking scopes of work, budgets, and technical review of products.

(Q35) Basic knowledge of current policies, guidelines, standards, and technical information regarding cultural landscape management.

In contrast, analyses related to two competencies produced positive gaps between the importance of a competency and how well prepared respondents perceived themselves to be. That is, respondents rated their competency relative to these items as being higher than its perceived importance.

Figure 1 presents a graphic depiction of the gaps between importance and competency assigned to each item.

Perceptions of First-Line Supervisors. There was virtually no agreement between supervisors and employees regarding training needs. Supervisors viewed eight competencies as having gaps in excess of 1.0. They were, in order of magnitude:

(Q37) Knowledge of job safety and health considerations and safety requirements for job assignments.

(Q4) Knowledge of the mission and objectives of the National Park Service including its enabling legislation.

(Q38) Knowledge of NPS loss prevention guidelines and regulations.

(Q30) Ability to articulate the role of cultural landscape preservation in the mission of the National Park Service verbally, graphically, and in writing.

(Q7) Basic knowledge of policies, guidelines, and standards for conducting basic and applied research, particularly the Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation and the National Register criteria.
(Q6) Basic knowledge of federal cultural resource preservation legislation, policies, guidelines and standards, and procedures, particularly the National Historic Preservation Act, the Secretary of the Interior’s Standards and Guidelines for Archeology and Historic Preservation, and National Park Service Management Policies and guidelines.

(Q2) Basic knowledge of the theories, principles, laws, practices, and techniques of landscape architecture, particularly as they apply to the preservation of cultural landscapes.

(Q35) Basic knowledge of current policies, guidelines, standards, and technical information regarding cultural landscape management.
<table>
<thead>
<tr>
<th>ITEMS RATED/QUESTIONS</th>
<th>MEAN IMPORTANCE</th>
<th>STANDARD DEVIATION</th>
<th>MEAN COMPETENCY</th>
<th>STANDARD DEVIATION</th>
<th>(I - C) GAP</th>
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<tbody>
<tr>
<td>Q26. Ability to apply and integrate, with technical supervision and oversight, the Section 106 compliance process in project management.</td>
<td>5.529</td>
<td>1.281</td>
<td>3.867</td>
<td>1.885</td>
<td>-1.662</td>
</tr>
<tr>
<td>Q16. Basic knowledge of maintenance management practices and systems (e.g., NPS Maintenance Management System and the Inventory and Condition Assessment Program).</td>
<td>4.824</td>
<td>1.380</td>
<td>3.250</td>
<td>1.483</td>
<td>-1.574</td>
</tr>
<tr>
<td>Q24. Basic knowledge of Section 106 laws, regulations, and procedures.</td>
<td>5.688</td>
<td>1.195</td>
<td>4.188</td>
<td>1.834</td>
<td>-1.500</td>
</tr>
<tr>
<td>Q13. Basic knowledge of natural resource policies, standards, and guidelines and the interrelationship of cultural and natural resources in the treatment, management, and maintenance of cultural landscapes.</td>
<td>5.176</td>
<td>1.286</td>
<td>3.765</td>
<td>1.602</td>
<td>-1.411</td>
</tr>
<tr>
<td>Q12. Basic knowledge of policies, standards, and guidelines related to the treatment of historic properties, particularly their application to cultural landscapes.</td>
<td>5.750</td>
<td>1.000</td>
<td>4.353</td>
<td>1.222</td>
<td>-1.397</td>
</tr>
<tr>
<td>Q14. Basic knowledge of policies, standards, and guidelines regarding planning, design, and construction projects.</td>
<td>5.235</td>
<td>1.562</td>
<td>4.000</td>
<td>1.658</td>
<td>-1.235</td>
</tr>
<tr>
<td>Q6. Basic knowledge of federal cultural resource preservation legislation, policies, guidelines and standards, and procedures, particularly the National Historic Preservation Act, the Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation, and National Park Service Management Policies and guidelines.</td>
<td>6.118</td>
<td>0.993</td>
<td>4.941</td>
<td>1.249</td>
<td>-1.177</td>
</tr>
<tr>
<td>Q17. Ability to apply, with technical supervision and oversight, policies, standards, and guidelines and prepare reports, plans, specifications, and cost estimates to support planning, treatment, and maintenance.</td>
<td>5.353</td>
<td>1.579</td>
<td>4.176</td>
<td>1.510</td>
<td>-1.177</td>
</tr>
<tr>
<td>Q11. Ability to conduct, with technical supervision and oversight, historical research, field investigations, data analysis, and to prepare reports, plans, specifications, and cost estimates to support planning for cultural landscape preservation.</td>
<td>6.471</td>
<td>0.717</td>
<td>5.353</td>
<td>1.169</td>
<td>-1.118</td>
</tr>
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<td>ITEMS RATED/QUESTIONS</td>
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<tr>
<td>Q18. Ability to work effectively with park operations responsible for cultural landscape management.</td>
<td>6.118</td>
<td>1.364</td>
<td>5.000</td>
<td>1.658</td>
<td>-1.118</td>
</tr>
<tr>
<td>Q15. Basic knowledge of the integration of allied disciplines, such as architecture, archeology, and natural resources in prescribing treatment and management activities.</td>
<td>5.353</td>
<td>1.222</td>
<td>4.294</td>
<td>1.490</td>
<td>-1.059</td>
</tr>
<tr>
<td>Q29. Ability to assist in the management of contract and cooperative agreement work, such as tracking scopes of work, budgets, and technical review of products.</td>
<td>4.941</td>
<td>1.391</td>
<td>3.938</td>
<td>1.652</td>
<td>-1.003</td>
</tr>
<tr>
<td>Q35. Basic knowledge of current policies, guidelines, standards, and technical information regarding cultural landscape management.</td>
<td>5.941</td>
<td>0.827</td>
<td>4.941</td>
<td>1.029</td>
<td>-1.000</td>
</tr>
<tr>
<td>Q36. Ability to participate as a team member in standardized training regarding cultural landscape management.</td>
<td>5.882</td>
<td>1.166</td>
<td>4.938</td>
<td>1.237</td>
<td>-0.944</td>
</tr>
<tr>
<td>Q20. Ability to assist in ongoing strategic planning, including developing and prioritizing program goals, objectives, and initiatives.</td>
<td>5.294</td>
<td>1.404</td>
<td>4.353</td>
<td>1.579</td>
<td>-0.941</td>
</tr>
<tr>
<td>Q38. Knowledge of NPS loss prevention guidelines and regulations.</td>
<td>4.353</td>
<td>1.693</td>
<td>3.467</td>
<td>2.031</td>
<td>-0.886</td>
</tr>
<tr>
<td>Q10. Ability to apply applicable criteria, standards, and guidelines to cultural landscape research, inventory, documentation, and analysis and evaluation.</td>
<td>6.235</td>
<td>0.752</td>
<td>5.353</td>
<td>0.996</td>
<td>-0.882</td>
</tr>
<tr>
<td>Q7. Basic knowledge of policies, guidelines, and standards for conducting basic and applied research, particularly the Secretary of the Interior’s Standards and Guidelines for Archeology and Historic Preservation and the National Register criteria.</td>
<td>5.882</td>
<td>0.993</td>
<td>5.000</td>
<td>1.118</td>
<td>-0.882</td>
</tr>
<tr>
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<tr>
<td>Q1. A degree in landscape architecture from a program accredited by the Landscape Architecture Accreditation Board, supplemented by a professional understanding of the National Park Service policies, objectives, and design criteria necessary for research, planning, design development, and construction documentation, including reports, plans, specifications, and cost estimates for cultural landscape preservation.</td>
<td>6.000</td>
<td>1.541</td>
<td>5.176</td>
<td>1.074</td>
<td>-0.824</td>
</tr>
<tr>
<td>Q25. Ability to apply, with technical supervision and oversight, policies, guidelines, standards and technical information to project work.</td>
<td>5.824</td>
<td>0.951</td>
<td>5.059</td>
<td>1.197</td>
<td>-0.765</td>
</tr>
<tr>
<td>Q2. Basic knowledge of the theories, principles, laws, practices, and techniques of landscape architecture, particularly as they apply to the preservation of cultural landscapes.</td>
<td>6.294</td>
<td>0.849</td>
<td>5.588</td>
<td>0.795</td>
<td>-0.706</td>
</tr>
<tr>
<td>Q8. Basic knowledge of cultural landscape research, inventory, documentation, and analysis and evaluation methodologies and techniques.</td>
<td>6.412</td>
<td>0.618</td>
<td>5.706</td>
<td>1.160</td>
<td>-0.706</td>
</tr>
<tr>
<td>Q19. Basic knowledge of goals, objectives, initiatives of the Servicewide Cultural Landscape Program.</td>
<td>5.765</td>
<td>0.970</td>
<td>5.059</td>
<td>1.638</td>
<td>-0.706</td>
</tr>
<tr>
<td>Q3. Basic knowledge of allied fields, such as planning, architecture, archeology, and the natural resource sciences necessary to conduct project reviews, supervise contracts, and provide technical assistance and information.</td>
<td>5.706</td>
<td>0.920</td>
<td>5.059</td>
<td>1.144</td>
<td>-0.647</td>
</tr>
<tr>
<td>Q4. Knowledge of the mission and objectives of the National Park Service including its enabling legislation.</td>
<td>5.706</td>
<td>1.047</td>
<td>5.118</td>
<td>1.166</td>
<td>-0.588</td>
</tr>
<tr>
<td>Q5. Basic knowledge of the origins, theories, principles, practices, and techniques of historic preservation, particularly as they apply to the preservation of cultural landscapes.</td>
<td>5.765</td>
<td>0.831</td>
<td>5.294</td>
<td>0.985</td>
<td>-0.471</td>
</tr>
<tr>
<td>Q32. Ability to use current computer software programs for written and graphic communication.</td>
<td>6.294</td>
<td>0.686</td>
<td>5.824</td>
<td>0.883</td>
<td>-0.470</td>
</tr>
<tr>
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<tr>
<td>Q9. Basic knowledge of the National Park Service cultural resource inventories and their utility in cultural resource management, such as the Cultural Landscapes Inventory, List of Classified Structures, and Archeological Sites Inventory.</td>
<td>5.706</td>
<td>0.849</td>
<td>5.294</td>
<td>1.105</td>
<td>-0.412</td>
</tr>
<tr>
<td>Q37. Knowledge of job safety and health considerations and safety requirements for job assignments.</td>
<td>5.235</td>
<td>1.562</td>
<td>4.824</td>
<td>1.667</td>
<td>-0.411</td>
</tr>
<tr>
<td>Q30. Ability to articulate the role of cultural landscape preservation in the mission of the National Park Service verbally, graphically, and in writing.</td>
<td>6.118</td>
<td>1.054</td>
<td>5.765</td>
<td>0.970</td>
<td>-0.353</td>
</tr>
<tr>
<td>Q23. Basic knowledge of current policies, guidelines, standards and technical information regarding cultural landscape preservation.</td>
<td>5.765</td>
<td>0.970</td>
<td>5.412</td>
<td>1.004</td>
<td>-0.353</td>
</tr>
<tr>
<td>Q22. Basic knowledge of allied fields such as planning, architecture, archeology, and the natural resource sciences.</td>
<td>5.471</td>
<td>1.281</td>
<td>5.235</td>
<td>1.300</td>
<td>-0.236</td>
</tr>
<tr>
<td>Q27. Ability to assist in conducting projects reviews and provide input regarding agency positions and direction.</td>
<td>5.059</td>
<td>1.478</td>
<td>4.875</td>
<td>1.500</td>
<td>-0.184</td>
</tr>
<tr>
<td>Q28. Ability to participate in interdisciplinary management activities.</td>
<td>4.765</td>
<td>1.602</td>
<td>4.588</td>
<td>1.460</td>
<td>-0.177</td>
</tr>
<tr>
<td>Q21. Knowledge of professional organizations, such as the American Society of Landscape Architects and the Alliance for Historic Landscape Preservation, academic institutions, and other private/public groups that share and obtain state-of-the-art information on cultural landscape preservation and professional practice.</td>
<td>5.000</td>
<td>1.275</td>
<td>4.941</td>
<td>1.435</td>
<td>-0.059</td>
</tr>
<tr>
<td>Q31. Ability to communicate research, treatment, maintenance, and management findings verbally, graphically, and in writing.</td>
<td>6.059</td>
<td>1.197</td>
<td>6.000</td>
<td>0.935</td>
<td>-0.059</td>
</tr>
<tr>
<td>Q34. Knowledge and understanding of the importance of public interpretation of cultural landscapes and the techniques for conveying cultural landscape information to the public.</td>
<td>5.688</td>
<td>1.352</td>
<td>5.882</td>
<td>1.054</td>
<td>0.194</td>
</tr>
<tr>
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<td>Q33. Ability to assist in making presentations and preparing papers regarding cultural landscape management for professional conferences and journals.</td>
<td>5.235</td>
<td>1.200</td>
<td>5.471</td>
<td>1.328</td>
<td>0.236</td>
</tr>
</tbody>
</table>
Figure 1. Cultural Stewardship Training Gap Analysis
Historical Landscape Architect - Entry Level

Denote symbols overlapping are due to extremely close Mean Importance and Mean Competency scores.
HISTORICAL LANDSCAPE ARCHITECT – DEVELOPMENTAL LEVEL

Profile of Respondents. The overwhelming majority of respondents was female (\(\bar{r} = 76.9\%\)). The average age of respondents was 38 years of age. Most had completed 19 years of formal education. See Appendix A-4 for information pertaining to academic degrees held by Developmental Level Historical Landscape Architects.

All respondents were White and held the rank of GS-11. They had been employed by the National Park Service for slightly less than six years (\(\bar{r} = 5.92\) years). However, they had been in their current position for only three years.

Importance of Competencies. As can be seen in Table 2, respondents rated 32 different competencies as having the greatest importance to them in their current positions. Each of these competencies received a mean importance rating of 6.0 or higher on the 7-point scale. They were:

(Q1) A degree in landscape architecture from a program accredited by the Landscape Architecture Accreditation Board; at least one year of graduate study in landscape preservation and at least one year of full-time professional experience in landscape preservation projects OR two years of full-time experience in landscape preservation projects.

(Q2) Ability to apply NPS policies, objectives, and design criteria necessary for research, planning, design development, and construction documentation, including reports, plans, specifications, and cost estimates for cultural landscape preservation.

(Q3) Ability to apply the theories, principles, laws, practices, and techniques of landscape architecture to the preservation of cultural landscapes.

(Q4) Knowledge of allied fields, such as planning, architecture, archeology, and the natural resource sciences necessary to conduct project reviews, supervise contracts, and provide technical assistance and information.

(Q5) Knowledge of the origins, theories, principles, practices, and techniques of historic preservation, particularly as they apply to the preservation of cultural landscapes.

(Q6) Knowledge of federal cultural resource preservation legislation, policies, guidelines and standards, particularly the National Historic Preservation Act, the Secretary of the Interior’s Standards and Guidelines for Archeology and Historic Preservation, and National Park Service Management Policies and guidelines.

(Q7) Knowledge and understanding of related resource management disciplines, such as history, architecture, archeology, ethnography, and the natural sciences to ensure their proper consideration in research, planning, and treatment.

(Q8) Ability to interpret and apply current laws, policies, guidelines, standards, and technical information necessary to conduct project reviews, and
provide technical assistance and information regarding cultural landscape management.

(Q11) Ability to determine the necessity for historical research, develop suitable research designs, and conduct or oversee appropriate levels of documentary research and field investigation.

(Q12) Ability to interpret and apply policies, guidelines, and standards in conducting basic and applied research, particularly the Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation and the National Register criteria.

(Q13) Ability to conduct and supervise cultural landscape research, inventory, documentation, analysis and evaluation based on accepted methodologies, techniques, criteria, standards, and guidelines.

(Q14) Ability to prepare and supervise the preparation of reports, plans, specifications, and cost estimates to support planning for cultural landscape preservation, based on historical research, field investigations, and data analysis.

(Q15) Skill at documenting research, inventory, documentation, and analysis and evaluation, both graphically and in narrative form.

(Q16) Knowledge of policies, standards, and guidelines related to the treatment of historic properties, particularly their application to cultural landscapes.

(Q17) Knowledge of natural resource policies, standards, and guidelines and the interrelationship of cultural and natural resources in the treatment, management, and maintenance of cultural landscapes.

(Q23) Ability to participate in interdisciplinary activities regarding preservation planning and treatment projects.

(Q25) Ability to work effectively with park operations responsible for cultural landscape management in developing treatment and maintenance solutions.

(Q26) Ability to apply and integrate the Section 106 compliance process into treatment and maintenance projects and advise park operations regarding practices that avoid adverse actions.

(Q27) Thorough knowledge of the goals, objectives, initiatives of the Servicewide Cultural Landscape Program.

(Q28) Ability to assist in ongoing strategic planning including developing and prioritizing program goals, objectives, and initiatives.

(Q34) Ability to work cooperatively as a team with professionals in allied fields, such as planning, architecture, archeology, and the natural resource sciences, and ability to serve as team leader on a project.

(Q35) Ability to provide review of complex projects and recommend agency positions and direction.
(Q38) Skill in interpreting and applying policies, standards, and guidelines in a manner that protects both cultural and natural resource values.

(Q39) Skill in oversight and technical review of products produced by cooperators and contractors.

(Q40) Skill in conducting and supervising Section 106 compliance procedures and participating in conflict resolution.

(Q41) Ability to make presentations and prepare papers regarding cultural landscape management for professional conferences and journals.

(Q42) Skill in articulating the role of cultural landscape preservation in the mission of the National Park Service verbally, graphically, and in writing.

(Q43) Skill in articulating complex landscape management issues verbally, graphically, and in writing.

(Q44) Skill in using standard computer software programs and the ability to select off-the-shelf software to improve written and graphic communication.

(Q45) Thorough knowledge of the techniques for interpreting the significance and character of cultural landscapes to the public.

(Q48) Ability to serve as a professional mentor and technical supervisor for intern historical landscape architects.

(Q49) Skill in conducting training regarding the application of current policies, guidelines, standards, and technical information to cultural landscape management.

No items were rated as being relatively unimportant (i.e., less than 4.0).

Perceived Level of Competency. Respondents reported feeling highly competent regarding nine of the 51 competencies, rating these items as 6.0 or higher on the 7-point scale. They were:

(Q1) A degree in landscape architecture from a program accredited by the Landscape Architecture Accreditation Board; at least one year of graduate study in landscape preservation and at least one year of full-time professional experience in landscape preservation projects OR two years of full-time experience in landscape preservation projects.

(Q3) Ability to apply the theories, principles, laws, practices, and techniques of landscape architecture to the preservation of cultural landscapes.

(Q13) Ability to conduct and supervise cultural landscape research, inventory, documentation, analysis and evaluation based on accepted methodologies, techniques, criteria, standards, and guidelines.
(Q15) Skill at documenting research, inventory, documentation, and analysis and evaluation, both graphically and in narrative form.

(Q16) Knowledge of policies, standards, and guidelines related to the treatment of historic properties, particularly their application to cultural landscapes.

(Q27) Thorough knowledge of the goals, objectives, initiatives of the Servicewide Cultural Landscape Program.

(Q41) Ability to make presentations and prepare papers regarding cultural landscape management for professional conferences and journals.

(Q42) Skill in articulating the role of cultural landscape preservation in the mission of the National Park Service verbally, graphically, and in writing.

(Q43) Skill in articulating complex landscape management issues verbally, graphically, and in writing.

On the other hand, respondents indicated they were not well prepared to address three competencies. They were:

(Q33) Knowledge of the legislation and agency requirements of Historic Property Leasing, Agricultural Leasing, Special Use Permits, and Partnership Agreements.

(Q37) Ability to serve as the Contracting Officer’s Technical Representative in architectural/engineering services contracts, and construction contracts.

(Q51) Thorough knowledge of NPS loss prevention guidelines and regulations.

Gaps in Cultural Resource Stewardship Training. Table 2 provides a ranking of essential competencies producing the largest “I-C gaps” within this occupational group. They were, in order of magnitude:

(Q51) Thorough knowledge of NPS loss prevention guidelines and regulations.

(Q37) Ability to serve as the Contracting Officer’s Technical Representative in architectural/engineering services contracts, and construction contracts.

(Q17) Knowledge of natural resource policies, standards, and guidelines and the interrelationship of cultural and natural resources in the treatment, management, and maintenance of cultural landscapes.

(Q40) Skill in conducting and supervising Section 106 compliance procedures and participating in conflict resolution.

(Q8) Ability to interpret and apply current laws, policies, guidelines, standards, and technical information necessary to conduct project reviews, and provide technical assistance and information regarding cultural landscape management.
(Q32) Knowledge of the legal and administrative requirements of services and construction contracts and cooperative agreement law, policies, guidelines, and management.

(Q38) Skill in interpreting and applying policies, standards, and guidelines in a manner that protects both cultural and natural resource values.

(Q39) Skill in oversight and technical review of products produced by cooperators and contractors.

(Q50) Thorough knowledge of job safety, health considerations, and safety requirements for job assignments.

(Q10) Skill in preparing and reviewing Section 106 compliance documents.

(Q11) Ability to determine the necessity for historical research, develop suitable research designs, and conduct or oversee appropriate levels of documentary research and field investigation.

(Q33) Knowledge of the legislation and agency requirements of Historic Property Leasing, Agricultural Leasing, Special Use Permits, and Partnership Agreements.

(Q2) Ability to apply NPS policies, objectives, and design criteria necessary for research, planning, design development, and construction documentation, including reports, plans, specifications, and cost estimates for cultural landscape preservation.

(Q14) Ability to apply NPS policies, objectives, and design criteria necessary for research, planning, design development, and construction documentation, including reports, plans, specifications, and cost estimates for cultural landscape preservation.

(Q9) Ability to apply knowledge of current national issues and laws affecting historic properties, such as the Architectural Barriers Act, life safety, fire and health codes, and sustainable design in project work.

(Q22) Ability to coordinate and carry out the implementation of treatment and maintenance projects including contract management.

Each of these competencies produced a gap in excess of 1.0. Only two competencies produced positive gaps where the relative importance was exceeded by the perceived level of preparedness. They were:

(Q1) A degree in landscape architecture from a program accredited by the Landscape Architecture Accreditation Board; at least one year of graduate study in landscape preservation and at least one year of full-time professional experience in landscape preservation projects OR two years of full-time experience in landscape preservation projects.

(Q46) Ability to work as a team member in the design and implementation of interpretation programs and tools, such as brochures, videos, and walking tours.
Figure 2 presents a graphic depiction of the gaps between importance and competency assigned to each item.

Perceptions of First-Line Supervisors. There was modest agreement between employees and first-line supervisors regarding the significant training needs of this occupational group. First-line supervisors rated 15 competencies as having gaps in excess of 1.0. Of these, six competencies were held in common (Q9, Q50, Q17, Q51, Q32, and Q8). Supervisors’ perceptions of critical training needs are listed below in order of magnitude:

(Q9) Ability to apply knowledge of current national issues and laws affecting historic properties, such as the Architectural Barriers Act, life safety, fire and health codes, and sustainable design in project work.

(Q6) Knowledge of federal cultural resource preservation legislation, policies, guidelines and standards, particularly the National Historic Preservation Act, the Secretary of the Interior’s Standards and Guidelines for Archeology and Historic Preservation, and National Park Service Management Policies and guidelines.

(Q50) Thorough knowledge of job safety, health considerations, and safety requirements for job assignments.

(Q17) Knowledge of natural resource policies, standards, and guidelines and the interrelationship of cultural and natural resources in the treatment, management, and maintenance of cultural landscapes.

(Q7) Knowledge and understanding of related resource management disciplines, such as history, architecture, archeology, ethnography, and the natural sciences to ensure their proper consideration in research, planning, and treatment.

(Q51) Thorough knowledge of NPS loss prevention guidelines and regulations.

(Q32) Knowledge of the legal and administrative requirements of services and construction contracts and cooperative agreement law, policies, guidelines, and management.

(Q35) Ability to provide review of complex projects and recommend agency positions and direction.

(Q5) Knowledge of the origins, theories, principles, practices, and techniques of historic preservation, particularly as they apply to the preservation of cultural landscapes.

(Q18) Knowledge of present construction practices and materials and their interaction with historic conditions sufficient to prescribe treatment and maintenance.

(Q49) Skill in conducting training regarding the application of current policies, guidelines, standards, and technical information to cultural landscape management.
(Q4) Knowledge of allied fields, such as planning, architecture, archeology, and the natural resource sciences necessary to conduct project reviews, supervise contracts, and provide technical assistance and information.

(Q16) Knowledge of policies, standards, and guidelines related to the treatment of historic properties, particularly their application to cultural landscapes.

(Q24) Ability to incorporate necessary measures to protect historic and archeological resources in the implementation of treatment projects and maintenance practices.

(Q8) Ability to interpret and apply current laws, policies, guidelines, standards, and technical information necessary to conduct project reviews, and provide technical assistance and information regarding cultural landscape management.
**Table 2. Cultural Resources Stewardship**

*Training Gap Analysis in Descending Order of Need*

*Historical Landscape Architect - Developmental Level*

<table>
<thead>
<tr>
<th>ITEMS RATED/QUESTIONS</th>
<th>MEAN IMPORTANCE</th>
<th>STANDARD DEVIATION</th>
<th>MEAN COMPETENCY</th>
<th>STANDARD DEVIATION</th>
<th>(I - C) GAP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q51. Thorough knowledge of NPS loss prevention guidelines and regulations.</td>
<td>5.167</td>
<td>1.749</td>
<td>3.308</td>
<td>1.702</td>
<td>-1.859</td>
</tr>
<tr>
<td>Q37. Ability to serve as the Contracting Officer’s Technical Representative in architectural/ engineering services contracts, and construction contracts.</td>
<td>5.417</td>
<td>1.782</td>
<td>3.600</td>
<td>1.838</td>
<td>-1.817</td>
</tr>
<tr>
<td>Q17. Knowledge of natural resource policies, standards, and guidelines and the interrelationship of cultural and natural resources in the treatment, management, and maintenance of cultural landscapes.</td>
<td>6.000</td>
<td>1.354</td>
<td>4.333</td>
<td>1.155</td>
<td>-1.667</td>
</tr>
<tr>
<td>Q40. Skill in conducting and supervising Section 106 compliance procedures and participating in conflict resolution.</td>
<td>6.000</td>
<td>1.789</td>
<td>4.455</td>
<td>1.968</td>
<td>-1.545</td>
</tr>
<tr>
<td>Q8. Ability to interpret and apply current laws, policies, guidelines, standards, and technical information necessary to conduct project reviews, and provide technical assistance and information regarding cultural landscape management.</td>
<td>6.385</td>
<td>0.650</td>
<td>4.917</td>
<td>1.621</td>
<td>-1.468</td>
</tr>
<tr>
<td>Q32. Knowledge of the legal and administrative requirements of services and construction contracts and cooperative agreement law, policies, guidelines, and management.</td>
<td>5.385</td>
<td>1.758</td>
<td>4.000</td>
<td>1.612</td>
<td>-1.385</td>
</tr>
<tr>
<td>Q38. Skill in interpreting and applying policies, standards, and guidelines in a manner that protects both cultural and natural resource values.</td>
<td>6.455</td>
<td>0.688</td>
<td>5.091</td>
<td>1.921</td>
<td>-1.364</td>
</tr>
<tr>
<td>Q39. Skill in oversight and technical review of products produced by cooperators and contractors.</td>
<td>6.455</td>
<td>0.522</td>
<td>5.091</td>
<td>1.446</td>
<td>-1.364</td>
</tr>
<tr>
<td>Q50. Thorough knowledge of job safety, health considerations, and safety requirements for job assignments.</td>
<td>5.417</td>
<td>1.564</td>
<td>4.154</td>
<td>1.281</td>
<td>-1.263</td>
</tr>
<tr>
<td>Q10. Skill in preparing and reviewing Section 106 compliance documents.</td>
<td>5.615</td>
<td>1.193</td>
<td>4.385</td>
<td>1.895</td>
<td>-1.230</td>
</tr>
<tr>
<td>ITEMS RATED/QUESTIONS</td>
<td>MEAN IMPORTANCE</td>
<td>STANDARD DEVIATION</td>
<td>MEAN COMPETENCY</td>
<td>STANDARD DEVIATION</td>
<td>(I - C) GAP</td>
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</tr>
<tr>
<td>Q11. Ability to determine the necessity for historical research, develop suitable research designs, and conduct or oversee appropriate levels of documentary research and field investigation.</td>
<td>6.692</td>
<td>0.630</td>
<td>5.462</td>
<td>1.761</td>
<td>-1.230</td>
</tr>
<tr>
<td>Q33. Knowledge of the legislation and agency requirements of Historic Property Leasing, Agricultural Leasing, Special Use Permits, and Partnership Agreements.</td>
<td>4.615</td>
<td>1.758</td>
<td>3.455</td>
<td>1.968</td>
<td>-1.160</td>
</tr>
<tr>
<td>Q2. Ability to apply NPS policies, objectives, and design criteria necessary for research, planning, design development, and construction documentation, including reports, plans, specifications, and cost estimates for cultural landscape preservation.</td>
<td>6.462</td>
<td>0.660</td>
<td>5.308</td>
<td>1.109</td>
<td>-1.154</td>
</tr>
<tr>
<td>Q14. Ability to prepare and supervise the preparation of reports, plans, specifications, and cost estimates to support planning for cultural landscape preservation, based on historical research, field investigations, and data analysis.</td>
<td>6.692</td>
<td>0.480</td>
<td>5.538</td>
<td>1.198</td>
<td>-1.154</td>
</tr>
<tr>
<td>Q9. Ability to apply knowledge of current national issues and laws affecting historic properties, such as the Architectural Barriers Act, life safety, fire and health codes, and sustainable design in project work.</td>
<td>5.538</td>
<td>1.127</td>
<td>4.385</td>
<td>1.557</td>
<td>-1.153</td>
</tr>
<tr>
<td>Q22. Ability to coordinate and carry out the implementation of treatment and maintenance projects including contract management.</td>
<td>5.385</td>
<td>1.805</td>
<td>4.250</td>
<td>1.603</td>
<td>-1.135</td>
</tr>
<tr>
<td>Q26. Ability to apply and integrate the Section 106 compliance process into treatment and maintenance projects and advise park operations regarding practices that avoid adverse actions.</td>
<td>6.154</td>
<td>1.772</td>
<td>5.167</td>
<td>1.642</td>
<td>-0.987</td>
</tr>
<tr>
<td>Q35. Ability to provide review of complex projects and recommend agency positions and direction.</td>
<td>6.083</td>
<td>1.730</td>
<td>5.091</td>
<td>1.640</td>
<td>-0.992</td>
</tr>
<tr>
<td>Q18. Knowledge of present construction practices and materials and their interaction with historic conditions sufficient to prescribe treatment and maintenance.</td>
<td>5.769</td>
<td>1.301</td>
<td>4.833</td>
<td>1.337</td>
<td>-0.936</td>
</tr>
</tbody>
</table>
Table 2. Cultural Resources Stewardship
Training Gap Analysis In Descending Order of Need
Historical Landscape Architect - Developmental Level

<table>
<thead>
<tr>
<th>ITEMS RATED/QUESTIONS</th>
<th>MEAN IMPORTANCE</th>
<th>STANDARD DEVIATION</th>
<th>MEAN COMPETENCY</th>
<th>STANDARD DEVIATION</th>
<th>(I - C) GAP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q7. Knowledge and understanding of related resource management disciplines, such as</td>
<td>6.231</td>
<td>1.092</td>
<td>5.308</td>
<td>1.750</td>
<td>-0.923</td>
</tr>
<tr>
<td>history, architecture, archeology, ethnography, and the natural sciences to ensure</td>
<td></td>
<td></td>
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<tr>
<td>their proper consideration in research, planning, and treatment.</td>
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<td></td>
</tr>
<tr>
<td>Q48. Ability to serve as a professional mentor and technical supervisor for intern</td>
<td>6.333</td>
<td>0.778</td>
<td>5.417</td>
<td>1.505</td>
<td>-0.916</td>
</tr>
<tr>
<td>historical landscape architects.</td>
<td></td>
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</tr>
<tr>
<td>Q19. Ability to facilitate the integration of cultural and natural resource</td>
<td>5.769</td>
<td>1.739</td>
<td>4.917</td>
<td>1.621</td>
<td>-0.852</td>
</tr>
<tr>
<td>management issues in prescribing treatment and maintenance practices.</td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q44. Skill in using standard computer software programs and the ability to select</td>
<td>6.083</td>
<td>0.996</td>
<td>5.231</td>
<td>1.166</td>
<td>-0.852</td>
</tr>
<tr>
<td>off-the-shelf software to improve written and graphic communication.</td>
<td></td>
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</tr>
<tr>
<td>Q5. Knowledge of the origins, theories, principles, practices, and techniques of</td>
<td>6.615</td>
<td>0.768</td>
<td>5.769</td>
<td>1.166</td>
<td>-0.846</td>
</tr>
<tr>
<td>historic preservation, particularly as they apply to the preservation of cultural</td>
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<tr>
<td>landscapes.</td>
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</tr>
<tr>
<td>Q4. Knowledge of allied fields, such as planning, architecture, archeology, and</td>
<td>6.231</td>
<td>0.832</td>
<td>5.462</td>
<td>1.127</td>
<td>-0.769</td>
</tr>
<tr>
<td>the natural resource sciences necessary to conduct project reviews, supervise</td>
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<tr>
<td>contracts, and provide technical assistance and information.</td>
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</tr>
<tr>
<td>Q15. Skill at documenting research, inventory, documentation, and analysis and</td>
<td>6.769</td>
<td>0.439</td>
<td>6.000</td>
<td>1.128</td>
<td>-0.769</td>
</tr>
<tr>
<td>evaluation, both graphically and in narrative form.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q21. Ability to prepare reports, plans, specifications, and cost estimates to</td>
<td>5.769</td>
<td>1.833</td>
<td>5.000</td>
<td>1.537</td>
<td>-0.769</td>
</tr>
<tr>
<td>support treatment and maintenance.</td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q49. Skill in conducting training regarding the application of current policies,</td>
<td>6.000</td>
<td>1.183</td>
<td>5.250</td>
<td>1.215</td>
<td>-0.750</td>
</tr>
<tr>
<td>guidelines, standards, and technical information to cultural landscape management.</td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ITEMS RATED/QUESTIONS</td>
<td>MEAN IMPORTANCE</td>
<td>STANDARD DEVIATION</td>
<td>MEAN COMPETENCY</td>
<td>STANDARD DEVIATION</td>
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<td>-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
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</tr>
<tr>
<td>Q34. Ability to work cooperatively as a team with professionals in allied fields, such as planning, architecture, archeology, and the natural resource sciences, and ability to serve as team leader on a project.</td>
<td>6.167</td>
<td>1.697</td>
<td>5.455</td>
<td>1.695</td>
<td>-0.712</td>
</tr>
<tr>
<td>Q6. Knowledge of federal cultural resource preservation legislation, policies, guidelines and standards, particularly the National Historic Preservation Act, the Secretary of the Interior’s Standards and Guidelines for Archeology and Historic Preservation, and National Park Service Management Policies and guidelines.</td>
<td>6.462</td>
<td>0.776</td>
<td>5.769</td>
<td>1.013</td>
<td>-0.693</td>
</tr>
<tr>
<td>Q45. Thorough knowledge of the techniques for interpreting the significance and character of cultural landscapes to the public.</td>
<td>6.417</td>
<td>0.996</td>
<td>5.750</td>
<td>1.055</td>
<td>-0.667</td>
</tr>
<tr>
<td>Q43. Skill in articulating complex landscape management issues verbally, graphically, and in writing.</td>
<td>6.727</td>
<td>0.467</td>
<td>6.077</td>
<td>1.382</td>
<td>-0.650</td>
</tr>
<tr>
<td>Q36. Ability to organize and coordinate complex projects involving multiple disciplines.</td>
<td>5.917</td>
<td>1.676</td>
<td>5.273</td>
<td>1.272</td>
<td>-0.644</td>
</tr>
<tr>
<td>Q12. Ability to interpret and apply policies, guidelines, and standards in conducting basic and applied research, particularly the Secretary of the Interior’s Standards and Guidelines for Archeology and Historic Preservation and the National Register criteria.</td>
<td>6.231</td>
<td>1.092</td>
<td>5.615</td>
<td>1.387</td>
<td>-0.616</td>
</tr>
<tr>
<td>Q24. Ability to incorporate necessary measures to protect historic and archeological resources in the implementation of treatment projects and maintenance practices.</td>
<td>5.846</td>
<td>1.676</td>
<td>5.250</td>
<td>1.422</td>
<td>-0.596</td>
</tr>
<tr>
<td>Q47. Ability to initiate, manage, and deliver training programs.</td>
<td>5.583</td>
<td>1.443</td>
<td>5.000</td>
<td>1.183</td>
<td>-0.583</td>
</tr>
<tr>
<td>Q42. Skill in articulating the role of cultural landscape preservation in the mission of the National Park Service verbally, graphically, and in writing.</td>
<td>6.636</td>
<td>0.505</td>
<td>6.077</td>
<td>1.256</td>
<td>-0.559</td>
</tr>
</tbody>
</table>
### Table 2. Cultural Resources Stewardship
Training Gap Analysis In Descending Order of Need
Historical Landscape Architect - Developmental Level

<table>
<thead>
<tr>
<th>ITEMS RATED/QUESTIONS</th>
<th>MEAN IMPORTANCE</th>
<th>STANDARD DEVIATION</th>
<th>MEAN COMPETENCY</th>
<th>STANDARD DEVIATION</th>
<th>(I - C) GAP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q20. Ability to interpret and apply policies, standards, and guidelines in prescribing treatment and maintenance in a manner that protects both cultural and natural resource values.</td>
<td>5.538</td>
<td>1.664</td>
<td>5.000</td>
<td>1.414</td>
<td>-0.538</td>
</tr>
<tr>
<td>Q25. Ability to work effectively with park operations responsible for cultural landscape management in developing treatment and maintenance solutions.</td>
<td>6.231</td>
<td>1.787</td>
<td>5.750</td>
<td>0.965</td>
<td>-0.481</td>
</tr>
<tr>
<td>Q13. Ability to conduct and supervise cultural landscape research, inventory, documentation, analysis and evaluation based on accepted methodologies, techniques, criteria, standards, and guidelines.</td>
<td>6.692</td>
<td>0.480</td>
<td>6.231</td>
<td>1.013</td>
<td>-0.461</td>
</tr>
<tr>
<td>Q16. Knowledge of policies, standards, and guidelines related to the treatment of historic properties, particularly their application to cultural landscapes.</td>
<td>6.538</td>
<td>0.660</td>
<td>6.083</td>
<td>0.996</td>
<td>-0.455</td>
</tr>
<tr>
<td>Q27. Thorough knowledge of the goals, objectives, initiatives of the Servicewide Cultural Landscape Program.</td>
<td>6.385</td>
<td>1.044</td>
<td>6.091</td>
<td>1.044</td>
<td>-0.294</td>
</tr>
<tr>
<td>Q41. Ability to make presentations and prepare papers regarding cultural landscape management for professional conferences and journals.</td>
<td>6.273</td>
<td>0.786</td>
<td>6.000</td>
<td>1.472</td>
<td>-0.273</td>
</tr>
<tr>
<td>Q23. Ability to participate in interdisciplinary activities regarding preservation planning and treatment projects.</td>
<td>6.000</td>
<td>1.683</td>
<td>5.750</td>
<td>1.357</td>
<td>-0.250</td>
</tr>
<tr>
<td>Q31. Ability to develop partnerships to assist in accomplishing the goals and objectives of the cultural landscape program.</td>
<td>5.692</td>
<td>1.750</td>
<td>5.455</td>
<td>1.128</td>
<td>-0.237</td>
</tr>
<tr>
<td>Q28. Ability to assist in ongoing strategic planning including developing and prioritizing program goals, objectives, and initiatives.</td>
<td>6.077</td>
<td>0.954</td>
<td>5.909</td>
<td>1.044</td>
<td>-0.168</td>
</tr>
<tr>
<td>Q3. Ability to apply the theories, principles, laws, practices, and techniques of landscape architecture to the preservation of cultural landscapes.</td>
<td>6.385</td>
<td>0.768</td>
<td>6.308</td>
<td>0.751</td>
<td>-0.077</td>
</tr>
</tbody>
</table>
### Table 2. Cultural Resources Stewardship
Training Gap Analysis In Descending Order of Need
Historical Landscape Architect - Developmental Level

<table>
<thead>
<tr>
<th>ITEMS RATED/QUESTIONS</th>
<th>MEAN IMPORTANCE</th>
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<th>(I - C) GAP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q30. Ability to act as a liaison for the cultural landscape program with other offices of the National Park Service, professional organizations, such as the American Society of Landscape Architects and the Alliance for Historic Landscape Preservation, academic institutions, and other private/public groups to share and obtain state-of-the-art information on cultural landscape preservation and professional practice.</td>
<td>5.692</td>
<td>1.251</td>
<td>5.636</td>
<td>1.362</td>
<td>-0.056</td>
</tr>
<tr>
<td>Q29. Ability to assist in long-term resource management planning regarding cultural landscape research, planning, and treatment.</td>
<td>5.846</td>
<td>1.819</td>
<td>5.818</td>
<td>1.168</td>
<td>-0.028</td>
</tr>
<tr>
<td>Q1. A degree in landscape architecture from a program accredited by the Landscape Architecture Accreditation Board; at least one year of graduate study in landscape preservation and at least one year of full-time professional experience in landscape preservation projects OR two years of full-time experience in landscape preservation projects.</td>
<td>6.769</td>
<td>0.439</td>
<td>7.000</td>
<td>0.000</td>
<td>0.231</td>
</tr>
<tr>
<td>Q46. Ability to work as a team member in the design and implementation of interpretation programs and tools, such as brochures, videos, and walking tours.</td>
<td>5.500</td>
<td>1.679</td>
<td>5.833</td>
<td>1.267</td>
<td>0.333</td>
</tr>
</tbody>
</table>
Denote symbols overlapping are due to extremely close Mean Importance and Mean Competency scores.
HISTORICAL LANDSCAPE ARCHITECT – FULL PERFORMANCE LEVEL

Profile of Respondents. Of the 17 Full Performance Historical Landscape Architects who responded to the survey, half were male and half were female. One respondent failed to mark this response on his/her survey instrument. The average age of respondents was slightly less than 45 years of age (\( \bar{x} = 44.94 \) years). They had completed over 18 years of formal education. See Appendix A-6 for information pertaining to academic degrees held by Full Performance Historical Landscape Architects.

Fifteen of the 17 respondents were White (two respondents did not mark this response on their questionnaire). Most held the rank of GS-12 (76.5%) even though three were GS-13’s and one was a GS-14. They had been employed by the National Park Service for well over 13 years (\( \bar{x} = 13.65 \) years). They had been in their current positions for slightly over six years.

Importance of Competencies. As can be seen in Table 3, respondents rated 15 different competencies as having the greatest importance to them in their current positions. They were:

(Q1) A graduate degree in Landscape Architecture from a program accredited by the Landscape Architecture Accreditation Board; a license to practice landscape architecture or has completed all prerequisites to take licensing exam; and at least two years of full-time professional experience in landscape preservation projects OR two years of full-time experience in landscape architecture from a program accredited by the Landscape Architecture Accreditation Board; a license to practice landscape architecture or has completed all prerequisites to take licensing exam; at least six years of full-time professional experience in landscape preservation projects.

(Q2) Skilled in applying National Park Service policies, objectives, and design criteria necessary for research, planning, design development, and construction documentation, including reports, plans, specifications, and cost estimates for cultural landscape preservation.

(Q3) Skilled in applying the theories, principles, laws, practices, and techniques of landscape architecture to the preservation of cultural landscapes.

(Q4) Skilled in facilitating the input of allied fields, such as planning, architecture, archeology, and the natural resource sciences in formulating agency positions, conducting project reviews, supervising contracts, and providing technical assistance and information.

(Q6) Thorough knowledge of federal cultural resource preservation legislation, policies, guidelines, and standards, particularly the National Historic Preservation Act, the Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation, and National Park Service Management Policies and guidelines.

(Q13) Skill in conducting and supervising cultural landscape research, inventory, documentation, and analysis and evaluation based on accepted methodologies and techniques and developing unprecedented methodologies as appropriate.
(Q15) Expertise in the application of cultural and natural resource policies, standards, and guidelines in prescribing treatment and maintenance in a manner that protects both cultural and natural resource values.

(Q16) Skill in facilitating interdisciplinary participation, review, and/or comment in prescribing treatment and maintenance practices in order to integrate all relevant cultural and natural resource management issues.

(Q21) Skill in working effectively with park operations responsible for cultural landscape management in developing treatment and maintenance solutions.

(Q22) Ability to evaluate and mitigate the impact of maintenance practices on cultural landscapes.

(Q28) Expertise in the interpretation and application of cultural and natural resource policies, standards, and guidelines in a manner which protects both cultural and natural resource values.

(Q30) Skill in interdisciplinary team work with professionals in allied fields such as planning, architecture, archeology, and the natural resource sciences and the ability to serve as team leader on a project.

(Q31) Skill in providing expert review of complex projects and articulating clear agency positions and direction.

(Q36) Skill in articulating the role of cultural landscape preservation in the mission of the National Park Service verbally, graphically, and in writing.

(Q37) Skill in articulating complex landscape management issues verbally, graphically, and in writing.

Each of these competencies received a mean importance rating of 6.0 or higher on the 7-point Importance Scale. Moreover, 38 of the 45 competencies posed to respondents were rated as 5.0 or higher. Conversely, only one competency was perceived to be relatively unimportant (i.e., less than 4.0). It was:

(Q45) Skill in interpreting and applying NPS loss prevention guidelines and regulations to specific work environments.

*Perceived Level of Competency.* Respondents reported feeling competent regarding 12 of the 45 competencies, rating these items as 5.5 or higher on the 7-point scale. They were:

(Q1) A graduate degree in Landscape Architecture from a program accredited by the Landscape Architecture Accreditation Board; a license to practice landscape architecture or has completed all prerequisites to take licensing exam; and at least two years of full-time professional experience in landscape preservation projects OR two years of full-time experience in landscape architecture from a program accredited by the Landscape Architecture Accreditation Board; a license to practice landscape
architecture or has completed all prerequisites to take licensing exam; at least

(Q3) Skilled in applying the theories, principles, laws, practices, and techniques of landscape architecture to the preservation of cultural landscapes.

(Q4) Skilled in facilitating the input of allied fields, such as planning, architecture, archeology, and the natural resource sciences in formulating agency positions, conducting project reviews, supervising contracts, and providing technical assistance and information.

(Q16) Skill in facilitating interdisciplinary participation, review, and/or comment in prescribing treatment and maintenance practices in order to integrate all relevant cultural and natural resource management issues.

(Q24) Ability to facilitate ongoing strategic planning including developing and prioritizing program goals, objectives, and initiatives.

(Q28) Expertise in the interpretation and application of cultural and natural resource policies, standards, and guidelines in a manner which protects both cultural and natural resource values.

(Q30) Skill in interdisciplinary team work with professionals in allied fields such as planning, architecture, archeology, and the natural resource sciences and the ability to serve as team leader on a project.

(Q33) Skill in oversight and technical review of products produced by cooperators and contractors.

(Q36) Skill in articulating the role of cultural landscape preservation in the mission of the National Park Service verbally, graphically, and in writing.

(Q37) Skill in articulating complex landscape management issues verbally, graphically, and in writing.

(Q39) Skill in making presentations and preparing papers regarding cultural landscape management for professional conferences and journals.

(Q40) Ability to oversee the development and implementation of effective strategies to interpret the significance and character of cultural landscapes to the public.

On the other hand, respondents reported feeling significantly less competent regarding their “Ability to assist in the development and monitoring of Historic Property Leasing, Agricultural Leasing...” (Q29) and their “Skills in interpreting and applying NPS loss prevention guidelines and regulations...” (Q45). As can be seen in the third column of Table 3, each of these competencies received a mean competency rating of less than 4.0 on the 7-point scale.

**Gaps in Cultural Resource Stewardship Training.** When analyzed together, the relative ratings of importance and competency provide a diagnostic assessment of training “gaps” in this occupational group. Table 3 provides a ranking of essential competencies producing the largest
"I-C gaps.” Six competencies produced gaps in excess of 1.0. They were, in order of magnitude:

(Q22) Ability to evaluate and mitigate the impact of maintenance practices on cultural landscapes.

(Q13) Skill in conducting and supervising cultural landscape research, inventory, documentation, and analysis and evaluation based on accepted methodologies and techniques and developing unprecedented methodologies as appropriate.

(Q21) Skill in working effectively with park operations responsible for cultural landscape management in developing treatment and maintenance solutions.

(Q2) Skilled in applying National Park Service policies, objectives, and design criteria necessary for research, planning, design development, and construction documentation, including reports, plans, specifications, and cost estimates for cultural landscape preservation.

(Q17) Skill in incorporating present construction practices and materials with historic conditions in prescribing treatment and maintenance.

(Q19) Skill in preparing and supervising the preparation of reports, plans, specifications, and cost estimates to support treatment and maintenance.

While it is necessary to be cautious when interpreting gaps with relatively low importance scores, each competency producing large gaps within this occupational group was rated as relatively important. Furthermore, several items produced gaps slightly below the 1.0 standard, which are rated as important components of respondents’ current jobs.

Figure 3 presents a graphic depiction of the gaps between importance and competency assigned to each item.

*Perceptions of First-Line Supervisors.* The magnitude of the ratings and the competencies perceived to be most deficient by first-line supervisors of Full Performance Historical Landscape Architects were drastically different from the employees. Little agreement was found. Supervisors reported 15 of the 45 competencies as had gaps in excess of 1.6. Four competencies were perceived to have gaps in excess of 2.0. They were:

(Q6) Thorough knowledge of federal cultural resource preservation legislation, policies, guidelines, and standards, particularly the National Historic Preservation Act, the Secretary of the Interior’s Standards and Guidelines for Archeology and Historic Preservation, and National Park Service Management Policies and guidelines.

(Q4) Skilled in facilitating the input of allied fields, such as planning, architecture, archeology, and the natural resource sciences in formulating agency positions, conducting project reviews, supervising contracts, and providing technical assistance and information.
(Q8) Skill in applying knowledge of current national issues and laws affecting historic properties, such as the Architectural Barriers Act, life safety, fire and health codes, and sustainable design in project and program management.

(Q7) Expertise in the interpretation and application of current laws, policies, guidelines, standards, and technical information necessary to formulate agency positions, conduct project reviews, and provide technical assistance and information regarding cultural landscape management.
<table>
<thead>
<tr>
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<th>MEAN COMPETENCY</th>
<th>STANDARD DEVIATION</th>
<th>(L - C) GAP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q22. Ability to evaluate and mitigate the impact of maintenance practices on cultural landscapes.</td>
<td>6.412</td>
<td>0.618</td>
<td>5.250</td>
<td>1.183</td>
<td>-1.162</td>
</tr>
<tr>
<td>Q13. Skill in conducting and supervising cultural landscape research, inventory, documentation, and analysis and evaluation based on accepted methodologies and techniques and developing unprecedented methodologies as appropriate.</td>
<td>6.235</td>
<td>0.970</td>
<td>5.176</td>
<td>1.468</td>
<td>-1.059</td>
</tr>
<tr>
<td>Q21. Skill in working effectively with park operations responsible for cultural landscape management in developing treatment and maintenance solutions.</td>
<td>6.118</td>
<td>1.166</td>
<td>5.059</td>
<td>1.197</td>
<td>-1.059</td>
</tr>
<tr>
<td>Q2. Skilled in applying National Park Service policies, objectives, and design criteria necessary for research, planning, design development, and construction documentation, including reports, plans, specifications, and cost estimates for cultural landscape preservation.</td>
<td>6.353</td>
<td>0.931</td>
<td>5.353</td>
<td>1.498</td>
<td>-1.000</td>
</tr>
<tr>
<td>Q17. Skill in incorporating present construction practices and materials with historic conditions in prescribing treatment and maintenance.</td>
<td>5.647</td>
<td>.786</td>
<td>4.647</td>
<td>1.579</td>
<td>-1.000</td>
</tr>
<tr>
<td>Q19. Skill in preparing and supervising the preparation of reports, plans, specifications, and cost estimates to support treatment and maintenance.</td>
<td>5.765</td>
<td>1.200</td>
<td>4.765</td>
<td>1.602</td>
<td>-1.000</td>
</tr>
<tr>
<td>Q3. Skilled in applying the theories, principles, laws, practices, and techniques of landscape architecture to the preservation of cultural landscapes.</td>
<td>6.588</td>
<td>0.712</td>
<td>5.706</td>
<td>1.404</td>
<td>-0.882</td>
</tr>
<tr>
<td>Q6. Thorough knowledge of federal cultural resource preservation legislation, policies, guidelines, and standards, particularly the National Historic Preservation Act, the Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation, and National Park Service Management Policies and guidelines.</td>
<td>6.059</td>
<td>0.827</td>
<td>5.294</td>
<td>1.404</td>
<td>-0.765</td>
</tr>
<tr>
<td>Q37. Skill in articulating complex landscape management issues verbally, graphically, and in writing.</td>
<td>6.588</td>
<td>0.618</td>
<td>5.824</td>
<td>0.951</td>
<td>-0.764</td>
</tr>
</tbody>
</table>
Table 3. Cultural Resources Stewardship  
Training Gap Analysis In Descending Order of Need  
Historical Landscape Architect - Full Performance Level

<table>
<thead>
<tr>
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<th>MEAN COMPETENCY</th>
<th>STANDARD DEVIATION</th>
<th>(I - C) GAP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q29. Ability to assist in the development and monitoring of Historic Property Leasing, Agricultural Leasing, Special Use Permits, and Partnership Agreements based on legislative and agency requirements.</td>
<td>4.118</td>
<td>0.993</td>
<td>3.375</td>
<td>1.996</td>
<td>-0.743</td>
</tr>
<tr>
<td>Q12. Expertise in the interpretation and application of policies, guidelines, and standards for conducting basic and applied research, particularly the Secretary of the Interior’s Standards and Guidelines for Archeology and Historic Preservation and the National Register criteria.</td>
<td>5.824</td>
<td>1.286</td>
<td>5.118</td>
<td>1.728</td>
<td>-0.706</td>
</tr>
<tr>
<td>Q31. Skill in providing expert review of complex projects and articulating clear agency positions and direction.</td>
<td>6.176</td>
<td>1.074</td>
<td>5.471</td>
<td>1.700</td>
<td>-0.705</td>
</tr>
<tr>
<td>Q43. Ability to serve as a professional mentor and technical supervisor for intern and developing historical landscape architects.</td>
<td>5.824</td>
<td>1.468</td>
<td>5.176</td>
<td>1.845</td>
<td>-0.648</td>
</tr>
<tr>
<td>Q15. Expertise in the application of cultural and natural resource policies, standards, and guidelines in prescribing treatment and maintenance in a manner that protects both cultural and natural resource values.</td>
<td>6.059</td>
<td>1.197</td>
<td>5.412</td>
<td>1.278</td>
<td>-0.647</td>
</tr>
<tr>
<td>Q36. Skill in articulating the role of cultural landscape preservation in the mission of the National Park Service verbally, graphically, and in writing.</td>
<td>6.471</td>
<td>0.800</td>
<td>5.824</td>
<td>0.951</td>
<td>-0.647</td>
</tr>
<tr>
<td>Q8. Skill in applying knowledge of current national issues and laws affecting historic properties, such as the Architectural Barriers Act, life safety, fire and health codes, and sustainable design in project and program management.</td>
<td>5.353</td>
<td>1.222</td>
<td>4.706</td>
<td>1.404</td>
<td>-0.647</td>
</tr>
<tr>
<td>Q14. Skill in preparing and supervising the preparation of reports, plans, specifications, and cost estimates to support planning for cultural landscape preservation, based on historical research, field investigations, and data analysis.</td>
<td>5.882</td>
<td>1.269</td>
<td>5.235</td>
<td>1.522</td>
<td>-0.647</td>
</tr>
<tr>
<td>ITEMS RATED/QUESTIONS</td>
<td>MEAN IMPORTANCE</td>
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<td>MEAN COMPETENCY</td>
<td>STANDARD DEVIATION</td>
<td>(I - C) GAP</td>
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</tr>
<tr>
<td>Q7. Expertise in the interpretation and application of current laws, policies, guidelines, standards, and technical information necessary to formulate agency positions, conduct project reviews, and provide technical assistance and information regarding cultural landscape management.</td>
<td>5.588</td>
<td>1.176</td>
<td>5.000</td>
<td>1.275</td>
<td>-0.588</td>
</tr>
<tr>
<td>Q18. Skill in incorporating measures which protect historic and archeological evidence in the implementation of treatment projects and maintenance practices.</td>
<td>5.588</td>
<td>1.176</td>
<td>5.000</td>
<td>1.541</td>
<td>-0.588</td>
</tr>
<tr>
<td>Q28. Expertise in the interpretation and application of cultural and natural resource policies, standards, and guidelines in a manner which protects both cultural and natural resource values.</td>
<td>6.059</td>
<td>1.029</td>
<td>5.529</td>
<td>1.328</td>
<td>-0.530</td>
</tr>
<tr>
<td>Q11. Skill in determining the necessity for historical research developing suitable research designs, and conducting or overseeing appropriate levels of documentary research and field investigation.</td>
<td>5.765</td>
<td>1.348</td>
<td>5.235</td>
<td>1.855</td>
<td>-0.530</td>
</tr>
<tr>
<td>Q5. Thorough knowledge of the origins, theories, principles, practices, and techniques of historic preservation, particularly as they apply to the preservation of cultural landscapes.</td>
<td>5.824</td>
<td>0.883</td>
<td>5.353</td>
<td>1.579</td>
<td>-0.471</td>
</tr>
<tr>
<td>Q20. Skill in coordinating and executing the implementation of treatment and maintenance projects including contract management.</td>
<td>5.471</td>
<td>1.231</td>
<td>5.000</td>
<td>1.541</td>
<td>-0.471</td>
</tr>
<tr>
<td>Q34. Extensive knowledge of Section 106 compliance laws, regulations, and procedures.</td>
<td>5.353</td>
<td>1.169</td>
<td>4.882</td>
<td>1.691</td>
<td>-0.471</td>
</tr>
<tr>
<td>Q35. Skill in conducting and supervising Section 106 compliance procedures and participating in conflict resolution.</td>
<td>5.353</td>
<td>1.272</td>
<td>4.882</td>
<td>1.616</td>
<td>-0.471</td>
</tr>
<tr>
<td>Q10. Expertise in the Section 106 compliance process and skill in preparing and reviewing compliance documentation.</td>
<td>5.353</td>
<td>1.115</td>
<td>4.941</td>
<td>1.676</td>
<td>-0.412</td>
</tr>
<tr>
<td>Q16. Skill in facilitating interdisciplinary participation, review, and/or comment in prescribing treatment and maintenance practices in order to integrate all relevant cultural and natural resource management issues.</td>
<td>6.000</td>
<td>1.000</td>
<td>5.588</td>
<td>1.228</td>
<td>-0.412</td>
</tr>
<tr>
<td>ITEMS RATED/QUESTIONS</td>
<td>MEAN IMPORTANCE</td>
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<td>MEAN COMPETENCY</td>
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<tr>
<td>--------------------------------------------------------------------------------------</td>
<td>-----------------</td>
<td>--------------------</td>
<td>-----------------</td>
<td>--------------------</td>
<td>-------------</td>
</tr>
<tr>
<td>Q9. Skill in incorporating related resource management disciplines, such as history, architecture, archeology, ethnography, and the natural sciences in project and program management to ensure their proper consideration in research, planning, and treatment.</td>
<td>5.647</td>
<td>1.272</td>
<td>5.353</td>
<td>1.097</td>
<td>-0.294</td>
</tr>
<tr>
<td>Q30. Skill in interdisciplinary teamwork with professionals in allied fields such as planning, architecture, archeology, and the natural resource sciences and the ability to serve as team leader on a project.</td>
<td>6.118</td>
<td>1.219</td>
<td>5.824</td>
<td>1.237</td>
<td>-0.294</td>
</tr>
<tr>
<td>Q41. Expertise in conducting training regarding the application of current policies, guidelines, standards, and technical information to cultural landscape management.</td>
<td>4.471</td>
<td>1.663</td>
<td>4.188</td>
<td>1.905</td>
<td>-0.283</td>
</tr>
<tr>
<td>Q45. Skill in interpreting and applying NPS loss prevention guidelines and regulations to specific work environments.</td>
<td>3.867</td>
<td>1.506</td>
<td>3.625</td>
<td>2.029</td>
<td>-0.242</td>
</tr>
<tr>
<td>Q4. Skilled in facilitating the input of allied fields, such as planning, architecture, archeology, and the natural resource sciences in formulating agency positions, conducting project reviews, supervising contracts, and providing technical assistance and information.</td>
<td>6.118</td>
<td>1.054</td>
<td>5.882</td>
<td>1.219</td>
<td>-0.236</td>
</tr>
<tr>
<td>Q33. Skill in oversight and technical review of products produced by cooperators and contractors.</td>
<td>5.824</td>
<td>1.074</td>
<td>5.588</td>
<td>1.228</td>
<td>-0.236</td>
</tr>
<tr>
<td>Q27. Skill in developing proposals, cooperative agreements, memoranda of understanding with appropriate organizations to carry out the objectives of the cultural landscape program.</td>
<td>5.235</td>
<td>1.300</td>
<td>5.000</td>
<td>1.592</td>
<td>-0.235</td>
</tr>
<tr>
<td>Q32. Skill in serving as the Contracting Officer’s Technical Representative in architectural/engineering services contracts and construction contracts.</td>
<td>5.647</td>
<td>1.272</td>
<td>5.412</td>
<td>1.326</td>
<td>-0.235</td>
</tr>
<tr>
<td>Q38. Skill in using standard computer software programs and the ability to select off-the-shelf software to improve written and graphic communication.</td>
<td>5.059</td>
<td>1.088</td>
<td>4.824</td>
<td>1.510</td>
<td>-0.235</td>
</tr>
</tbody>
</table>
### Table 3. Cultural Resources Stewardship Training Gap Analysis In Descending Order of Need

<table>
<thead>
<tr>
<th>ITEMS RATED/QUESTIONS</th>
<th>MEAN IMPORTANCE</th>
<th>STANDARD DEVIATION</th>
<th>MEAN COMPETENCY</th>
<th>STANDARD DEVIATION</th>
<th>(I - C) GAP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q44. Ability to identify and correct job safety and health hazards, instruct employees on safety requirements for job assignments, and report loss incidents in accordance with agency regulations.</td>
<td>4.176</td>
<td>1.741</td>
<td>4.125</td>
<td>2.029</td>
<td>-0.051</td>
</tr>
<tr>
<td>Q26. Skill in being a liaison for the cultural landscape program with other offices of the National Park Service, professional organizations, such as the American Society of Landscape Architects and the Alliance for Historic Landscape Preservation, academic institutions, and other private/public groups to share and obtain state-of-the-art information on cultural landscape preservation and professional practice.</td>
<td>5.294</td>
<td>1.572</td>
<td>5.250</td>
<td>1.483</td>
<td>-0.044</td>
</tr>
<tr>
<td>Q25. Skill in coordinating cultural landscape program activities with other park operational programs, such as historic structures, integrated pest management, and maintenance management.</td>
<td>5.353</td>
<td>1.579</td>
<td>5.313</td>
<td>1.401</td>
<td>-0.040</td>
</tr>
<tr>
<td>Q1. A graduate degree in Landscape Architecture from a program accredited by the Landscape Architecture Accreditation Board; a license to practice landscape architecture or has completed all prerequisites to take licensing exam; and at least two years of full-time professional experience in landscape preservation projects OR two years of full-time experience in landscape architecture from a program accredited by the Landscape Architecture Accreditation Board; a license to practice landscape architecture or has completed all prerequisites to take licensing exam; at least six years of full-time professional experience in landscape preservation projects.</td>
<td>6.529</td>
<td>0.514</td>
<td>6.588</td>
<td>0.795</td>
<td>0.059</td>
</tr>
<tr>
<td>Q40. Ability to oversee the development and implementation of effective strategies to interpret the significance and character of cultural landscapes to the public.</td>
<td>5.647</td>
<td>1.222</td>
<td>5.750</td>
<td>1.571</td>
<td>0.103</td>
</tr>
<tr>
<td>Q23. Skill in conducting long-range planning and budget formulation based on a knowledge of the National Park Service budget process.</td>
<td>4.588</td>
<td>1.661</td>
<td>4.938</td>
<td>2.081</td>
<td>0.350</td>
</tr>
<tr>
<td>Q42. Skill in initiating, managing, and delivering training programs.</td>
<td>4.118</td>
<td>1.691</td>
<td>4.533</td>
<td>1.922</td>
<td>0.415</td>
</tr>
<tr>
<td>ITEMS RATED/QUESTIONS</td>
<td>MEAN IMPORTANCE</td>
<td>STANDARD DEVIATION</td>
<td>MEAN COMPETENCY</td>
<td>STANDARD DEVIATION</td>
<td>(I - C) GAP</td>
</tr>
<tr>
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<td>-----------------</td>
<td>--------------------</td>
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<td>-------------</td>
</tr>
<tr>
<td>Q39. Skill in making presentations and preparing papers regarding cultural landscape management for professional conferences and journals.</td>
<td>5.412</td>
<td>1.543</td>
<td>5.875</td>
<td>1.147</td>
<td>0.463</td>
</tr>
<tr>
<td>Q24. Ability to facilitate ongoing strategic planning including developing and prioritizing program goals, objectives, and initiatives.</td>
<td>4.882</td>
<td>1.654</td>
<td>5.563</td>
<td>1.504</td>
<td>0.681</td>
</tr>
</tbody>
</table>
Figure 3. Cultural Stewardship Training Gap Analysis

Historical Landscape Architect - Full Performance Level

Mean Importance
Mean Competency

Question Number

Denote symbols overlapping are due to extremely close Mean Importance and Mean Competency scores.
REFERENCES


National Park Service
Cultural Resources Stewardship Needs Assessment
Historical Landscape Architect - Entry Level

In the performance of your present job as a historical landscape architect, how important are the following professional competencies? The essential competencies for historical landscape architect can be found in the NPS Tracking Kit at the “Learning Place” web site: www.nps.gov/training/npsonly/npsescom.htm. Please check the most appropriate response for each item.

Professional Discipline

1. A degree in landscape architecture from a program accredited by the Landscape Architecture Accreditation Board, supplemented by a professional understanding of the National Park Service policies, objectives, and design criteria necessary for research, planning, design development, and construction documentation, including reports, plans, specifications, and cost estimates for cultural landscape preservation.

2. Basic knowledge of the theories, principles, laws, practices, and techniques of landscape architecture, particularly as they apply to the preservation of cultural landscapes.

3. Basic knowledge of allied fields, such as planning, architecture, archeology, and the natural resource sciences necessary to conduct project reviews, supervise contracts, and provide technical assistance and information.

Preservation Law, Philosophy, and Practice

4. Knowledge of the mission and objectives of the National Park Service including its enabling legislation.

5. Basic knowledge of the origins, theories, principles, practices, and techniques of historic preservation, particularly as they apply to the preservation of cultural landscapes.
6. Basic knowledge of federal cultural resource preservation legislation, policies, guidelines and standards, and procedures, particularly the National Historic Preservation Act, the Secretary of the Interior’s Standards and Guidelines for Archeology and Historic Preservation, and National Park Service Management Policies and guidelines.

Research and Inventory

7. Basic knowledge of policies, guidelines, and standards for conducting basic and applied research, particularly the Secretary of the Interior’s Standards and Guidelines for Archeology and Historic Preservation and the National Register criteria.

8. Basic knowledge of cultural landscape research, inventory, documentation, and analysis and evaluation methodologies and techniques.

9. Basic knowledge of the National Park Service cultural resource inventories and their utility in cultural resource management, such as the Cultural Landscapes Inventory, List of Classified Structures, and Archeological Sites Inventory.

10. Ability to apply applicable criteria, standards, and guidelines to cultural landscape research, inventory, documentation, and analysis and evaluation.

11. Ability to conduct, with technical supervision and oversight, historical research, field investigations, data analysis, and to prepare reports, plans, specifications, and cost estimates to support planning for cultural landscape preservation.
<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>Basic knowledge of policies, standards, and guidelines related to the treatment of historic properties, particularly their application to cultural landscapes.</td>
<td>1</td>
<td></td>
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<tr>
<td>13</td>
<td>Basic knowledge of natural resource policies, standards, and guidelines and the interrelationship of cultural and natural resources in the treatment, management, and maintenance of cultural landscapes.</td>
<td>1</td>
<td></td>
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<tr>
<td>14</td>
<td>Basic knowledge of policies, standards, and guidelines regarding planning, design, and construction projects.</td>
<td>1</td>
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<tr>
<td>15</td>
<td>Basic knowledge of the integration of allied disciplines, such as architecture, archeology, and natural resources in prescribing treatment and management activities.</td>
<td>1</td>
<td></td>
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<td>16</td>
<td>Basic knowledge of maintenance management practices and systems (e.g., NPS Maintenance Management System and the Inventory and Condition Assessment Program).</td>
<td>1</td>
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<tr>
<td>17</td>
<td>Ability to apply, with technical supervision and oversight, policies, standards, and guidelines and prepare reports, plans, specifications, and cost estimates to support planning, treatment, and maintenance.</td>
<td>1</td>
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<tr>
<td>18</td>
<td>Ability to work effectively with park operations responsible for cultural landscape management.</td>
<td>1</td>
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# APPENDIX A-1

## Program and Project Management

**-Program Management-**

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<tbody>
<tr>
<td>19. Basic knowledge of goals, objectives, initiatives of the Servicewide Cultural Landscape Program.</td>
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<td>20. Ability to assist in ongoing strategic planning, including developing and prioritizing program goals, objectives, and initiatives.</td>
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<tr>
<td>21. Knowledge of professional organizations, such as the American Society of Landscape Architects and the Alliance for Historic Landscape Preservation, academic institutions, and other private/public groups that share and obtain state-of-the-art information on cultural landscape preservation and professional practice.</td>
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**-Project Management-**

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<tbody>
<tr>
<td>22. Basic knowledge of allied fields such as planning, architecture, archeology, and the natural resource sciences.</td>
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<tr>
<td>23. Basic knowledge of current policies, guidelines, standards and technical information regarding cultural landscape preservation.</td>
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<tr>
<td>24. Basic knowledge of Section 106 laws, regulations, and procedures.</td>
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<tr>
<td>25. Ability to apply, with technical supervision and oversight, policies, guidelines, standards and technical information to project work.</td>
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<tr>
<td>26. Ability to apply and integrate, with technical supervision and oversight, the Section 106 compliance process in project management.</td>
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</tbody>
</table>
27. Ability to assist in conducting projects reviews and provide input regarding agency positions and direction.

28. Ability to participate in interdisciplinary management activities.

29. Ability to assist in the management of contract and cooperative agreement work, such as tracking scopes of work, budgets, and technical review of products.

**Writing and Communication**

30. Ability to articulate the role of cultural landscape preservation in the mission of the National Park Service verbally, graphically, and in writing.

31. Ability to communicate research, treatment, maintenance, and management findings verbally, graphically, and in writing.

32. Ability to use current computer software programs for written and graphic communication.

33. Ability to assist in making presentations and preparing papers regarding cultural landscape management for professional conferences and journals.

34. Knowledge and understanding of the importance of public interpretation of cultural landscapes and the techniques for conveying cultural landscape information to the public.
### Training

35. Basic knowledge of current policies, guidelines, standards, and technical information regarding cultural landscape management.

36. Ability to participate as a team member in standardized training regarding cultural landscape management.

### Safety

37. Knowledge of job safety and health considerations and safety requirements for job assignments.

38. Knowledge of NPS loss prevention guidelines and regulations.
Cultural Resources Stewardship Needs Assessment
Historical Landscape Architect - Entry Level

The National Park Service has the responsibility of providing meaningful training and education for its employees. The purpose of this training is to ensure the basic missions of the Service and its individual units are met, while allowing employees to reach their personal career goals.

Please look at the same list again. This time consider how you rate your overall preparation (all sources) for these aspects of being a historical landscape architect. Please check the most appropriate response for each item. If the training competency does not apply to your present position, check the first box - N/A.

Professional Discipline

39. A degree in landscape architecture from a program accredited by the Landscape Architecture Accreditation Board, supplemented by a professional understanding of the National Park Service policies, objectives, and design criteria necessary for research, planning, design development, and construction documentation, including reports, plans, specifications, and cost estimates for cultural landscape preservation.

40. Basic knowledge of the theories, principles, laws, practices, and techniques of landscape architecture, particularly as they apply to the preservation of cultural landscapes.

41. Basic knowledge of allied fields, such as planning, architecture, archeology, and the natural resource sciences necessary to conduct project reviews, supervise contracts, and provide technical assistance and information.

Preservation Law, Philosophy, and Practice

42. Knowledge of the mission and objectives of the National Park Service including its enabling legislation.
43. Basic knowledge of the origins, theories, principles, practices, and techniques of historic preservation, particularly as they apply to the preservation of cultural landscapes.

44. Basic knowledge of federal cultural resource preservation legislation, policies, guidelines and standards, and procedures, particularly the National Historic Preservation Act, the Secretary of the Interior’s Standards and Guidelines for Archeology and Historic Preservation, and National Park Service Management Policies and guidelines.

Research and Inventory

45. Basic knowledge of policies, guidelines, and standards for conducting basic and applied research, particularly the Secretary of the Interior’s Standards and Guidelines for Archeology and Historic Preservation and the National Register criteria.

46. Basic knowledge of cultural landscape research, inventory, documentation, and analysis and evaluation methodologies and techniques.

47. Basic knowledge of the National Park Service cultural resource inventories and their utility in cultural resource management, such as the Cultural Landscapes Inventory, List of Classified Structures, and Archeological Sites Inventory.

48. Ability to apply applicable criteria, standards, and guidelines to cultural landscape research, inventory, documentation, and analysis and evaluation.
49. Ability to conduct, with technical supervision and oversight, historical research, field investigations, data analysis, and to prepare reports, plans, specifications, and cost estimates to support planning for cultural landscape preservation.

Treatment and Preservation Maintenance

50. Basic knowledge of policies, standards, and guidelines related to the treatment of historic properties, particularly their application to cultural landscapes.

51. Basic knowledge of natural resource policies, standards, and guidelines and the interrelationship of cultural and natural resources in the treatment, management, and maintenance of cultural landscapes.

52. Basic knowledge of policies, standards, and guidelines regarding planning, design, and construction projects.

53. Basic knowledge of the integration of allied disciplines, such as architecture, archeology, and natural resources in prescribing treatment and management activities.

54. Basic knowledge of maintenance management practices and systems (e.g., NPS Maintenance Management System and the Inventory and Condition Assessment Program).

55. Ability to apply, with technical supervision and oversight, policies, standards, and guidelines and prepare reports, plans, specifications, and cost estimates to support planning, treatment, and maintenance.
56. Ability to work effectively with park operations responsible for cultural landscape management.

**Program and Project Management**

- **Program Management**-

57. Basic knowledge of goals, objectives, initiatives of the Servicewide Cultural Landscape Program.

58. Ability to assist in ongoing strategic planning including developing and prioritizing program goals, objectives, and initiatives.

59. Knowledge of professional organizations, such as the American Society of Landscape Architects and the Alliance for Historic Landscape Preservation, academic institutions, and other private/public groups, that share and obtain state-of-the-art information on cultural landscape preservation and professional practice.

- **Project Management**-

60. Basic knowledge of allied fields such as planning, architecture and archeology and the natural resource sciences.

61. Basic knowledge of current policies, guidelines, standards and technical information regarding cultural landscape preservation.

62. Basic knowledge of Section 106 laws, regulations, and procedures.

63. Ability to apply, with technical supervision and oversight, policies, guidelines, standards and technical information to project work.
64. Ability to apply and integrate, with technical supervision and oversight, the Section 106 compliance process in project management.

65. Ability to assist in conducting projects reviews and provide input regarding agency positions and direction.

66. Ability to participate in interdisciplinary management activities.

67. Ability to assist in the management of contract and cooperative agreement work, such as tracking scopes of work, budgets, and technical review of products.

**Writing and Communication**

68. Ability to articulate the role of cultural landscape preservation in the mission of the National Park Service verbally, graphically, and in writing.

69. Ability to communicate research, treatment, maintenance, and management findings verbally, graphically, and in writing.

70. Ability to use current computer software programs for written and graphic communication.

71. Ability to assist in making presentations and preparing papers regarding cultural landscape management for professional conferences and journals.

72. Knowledge and understanding of the importance of public interpretation of cultural landscapes and the techniques for conveying cultural landscape information to the public.
Training

73. Basic knowledge of current policies, guidelines, standards, and technical information regarding cultural landscape management.

74. Ability to participate as a team member in standardized training regarding cultural landscape management.

Safety

75. Knowledge of job safety and health considerations and safety requirements for job assignments.

76. Knowledge of NPS loss prevention guidelines and regulations.
Demographics

77. Age (years): ______

78. Gender:  □ Female  □ Male

79. Race/National Origin:
   □ American Indian or Alaskan Native  □ Hispanic
   □ Black (Not of Hispanic Origin)  □ Asian or Pacific Islander
   □ White (Not of Hispanic Origin)  □ Other (Please Specify):

80. Do you have a disability?  □ Yes  □ No

81. Current GS level ______

82. Number of years served in the National Park Service? ______

83. Number of years in current position? ______

84. Education (Circle the highest number of years of formal education completed)
   <12  12  13  14  15  16  17  18  18+

85. If you hold a college degree(s), please complete the following questions regarding the type of degree(s) and major field(s) of study:

**Bachelor's:**

Type of Degree (i.e., B.S., B.A., etc.) ________________________________

Major Field of Study ________________________________

**Master's:**

Type of Degree (i.e., M.S., M.A., etc.) ________________________________

Major Field of Study ________________________________

**Doctorate:**

Type of Degree (i.e., Ph.D., Ed.D., etc.) ________________________________

Major Field of Study ________________________________
The following list of degrees, as reported by the respondents, has been condensed for the ease of compilation. Some specific degree titles do not appear due to categorization under a more general term.

**HISTORICAL LANDSCAPE ARCHITECT – ENTRY LEVEL**

**UNDERGRADUATE [A.S., B.S. & B.A.]**

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<tr>
<th>Subject</th>
<th>Code</th>
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<tbody>
<tr>
<td>ANTHROPOLOGY</td>
<td>01</td>
</tr>
<tr>
<td>BIOLOGY/CHEMISTRY</td>
<td>02</td>
</tr>
<tr>
<td>CONSERVATION &amp; RESOURCE STUDIES</td>
<td>01</td>
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<tr>
<td>ENGLISH</td>
<td>01</td>
</tr>
<tr>
<td>ENVIRONMENTAL STUDIES</td>
<td>01</td>
</tr>
<tr>
<td>FRENCH/FRENCH LITERATURE</td>
<td>02</td>
</tr>
<tr>
<td>LANDSCAPE ARCHITECTURE</td>
<td>04</td>
</tr>
<tr>
<td>PARKS &amp; RECREATION</td>
<td>01</td>
</tr>
<tr>
<td>POLITICAL SCIENCE</td>
<td>01</td>
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<tr>
<td>RECORDING INDUSTRY MANAGEMENT</td>
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<tr>
<td>RECREATION RESOURCES MANAGEMENT</td>
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<tr>
<td>TRANSPORTATION</td>
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</table>

**GRADUATE [M.S. & M.A.]**

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<th>Subject</th>
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<tr>
<td>ANTHROPOLOGY</td>
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<tr>
<td>BUSINESS</td>
<td>01</td>
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<tr>
<td>HISTORICAL PRESERVATION PLANNING</td>
<td>02</td>
</tr>
<tr>
<td>LANDSCAPE ARCHITECTURE</td>
<td>12</td>
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</tbody>
</table>
National Park Service
Cultural Resources Stewardship Needs Assessment
Historical Landscape Architect - Developmental Level

In the performance of your present job as a historical landscape architect, how important are the following professional competencies? The essential competencies for historical landscape architect can be found in the NPS Tracking Kit at the "Learning Place" website: [www.nps.gov/training/npsonly/npsecom.htm](http://www.nps.gov/training/npsonly/npsecom.htm). Please check the most appropriate response for each item.

**Professional Discipline**

1. A degree in landscape architecture from a program accredited by the Landscape Architecture Accreditation Board; at least one year of graduate study in landscape preservation and at least one year of full-time professional experience in landscape preservation projects OR two years of full-time experience in landscape preservation projects.

2. Ability to apply NPS policies, objectives, and design criteria necessary for research, planning, design development, and construction documentation, including reports, plans, specifications, and cost estimates for cultural landscape preservation.

3. Ability to apply the theories, principles, laws, practices, and techniques of landscape architecture to the preservation of cultural landscapes.

4. Knowledge of allied fields, such as planning, architecture, archeology, and the natural resource sciences necessary to conduct project reviews, supervise contracts, and provide technical assistance and information.

**Preservation Law, Philosophy, and Practice**

5. Knowledge of the origins, theories, principles, practices, and techniques of historic preservation, particularly as they apply to the preservation of cultural landscapes.
6. Knowledge of federal cultural resource preservation legislation, policies, guidelines and standards, particularly the National Historic Preservation Act, the Secretary of the Interior’s Standards and Guidelines for Archeology and Historic Preservation, and National Park Service Management Policies and guidelines.

7. Knowledge and understanding of related resource management disciplines, such as history, architecture, archeology, ethnography, and the natural sciences to ensure their proper consideration in research, planning, and treatment.

8. Ability to interpret and apply current laws, policies, guidelines, standards, and technical information necessary to conduct project reviews, and provide technical assistance and information regarding cultural landscape management.

9. Ability to apply knowledge of current national issues and laws affecting historic properties, such as the Architectural Barriers Act, life safety, fire and health codes, and sustainable design in project work.

10. Skill in preparing and reviewing Section 106 compliance documents.

**Research and Inventory**

11. Ability to determine the necessity for historical research, develop suitable research designs, and conduct or oversee appropriate levels of documentary research and field investigation.
12. Ability to interpret and apply policies, guidelines, and standards in conducting basic and applied research, particularly the Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation and the National Register criteria.

13. Ability to conduct and supervise cultural landscape research, inventory, documentation, analysis and evaluation based on accepted methodologies, techniques, criteria, standards, and guidelines.

14. Ability to prepare and supervise the preparation of reports, plans, specifications, and cost estimates to support planning for cultural landscape preservation, based on historical research, field investigations, and data analysis.

15. Skill at documenting research, inventory, documentation, and analysis and evaluation, both graphically and in narrative form.

**Treatment and Preservation Maintenance**

16. Knowledge of policies, standards, and guidelines related to the treatment of historic properties, particularly their application to cultural landscapes.

17. Knowledge of natural resource policies, standards, and guidelines and the interrelationship of cultural and natural resources in the treatment, management, and maintenance of cultural landscapes.

18. Knowledge of present construction practices and materials and their interaction with historic conditions sufficient to prescribe treatment and maintenance.
19. Ability to facilitate the integration of cultural and natural resource management issues in prescribing treatment and maintenance practices.

20. Ability to interpret and apply policies, standards, and guidelines in prescribing treatment and maintenance in a manner that protects both cultural and natural resource values.

21. Ability to prepare reports, plans, specifications, and cost estimates to support treatment and maintenance.

22. Ability to coordinate and carry out the implementation of treatment and maintenance projects including contract management.

23. Ability to participate in interdisciplinary activities regarding preservation planning and treatment projects.

24. Ability to incorporate necessary measures to protect historic and archeological resources in the implementation of treatment projects and maintenance practices.

25. Ability to work effectively with park operations responsible for cultural landscape management in developing treatment and maintenance solutions.

26. Ability to apply and integrate the Section 106 compliance process into treatment and maintenance projects and advise park operations regarding practices that avoid adverse actions.
Program and Project Management

-Program Management-

27. Thorough knowledge of the goals, objectives, initiatives of the Servicewide Cultural Landscape Program.

28. Ability to assist in ongoing strategic planning including developing and prioritizing program goals, objectives, and initiatives.

29. Ability to assist in long-term resource management planning regarding cultural landscape research, planning, and treatment.

30. Ability to act as a liaison for the cultural landscape program with other offices of the National Park Service, professional organizations, such as the American Society of Landscape Architects and the Alliance for Historic Landscape Preservation, academic institutions, and other private/public groups to share and obtain state-of-the-art information on cultural landscape preservation and professional practice.

31. Ability to develop partnerships to assist in accomplishing the goals and objectives of the cultural landscape program.

-Project Management-

32. Knowledge of the legal and administrative requirements of services and construction contracts and cooperative agreement law, policies, guidelines, and management.

33. Knowledge of the legislation and agency requirements of Historic Property Leasing, Agricultural Leasing, Special Use Permits, and Partnership Agreements.
34. Ability to work cooperatively as a team with professionals in allied fields, such as planning, architecture, archeology, and the natural resource sciences, and ability to serve as team leader on a project.

35. Ability to provide review of complex projects and recommend agency positions and direction.

36. Ability to organize and coordinate complex projects involving multiple disciplines.

37. Ability to serve as the Contracting Officer’s Technical Representative in architectural/engineering services contracts, and construction contracts.

38. Skill in interpreting and applying policies, standards, and guidelines in a manner that protects both cultural and natural resource values.

39. Skill in oversight and technical review of products produced by cooperators and contractors.

40. Skill in conducting and supervising Section 106 compliance procedures and participating in conflict resolution.

**Writing and Communication**

41. Ability to make presentations and prepare papers regarding cultural landscape management for professional conferences and journals.

42. Skill in articulating the role of cultural landscape preservation in the mission of the National Park Service verbally, graphically, and in writing.

43. Skill in articulating complex landscape management issues verbally, graphically, and in writing.
44. Skill in using standard computer software programs and the ability to select off-the-shelf software to improve written and graphic communication.

45. Thorough knowledge of the techniques for interpreting the significance and character of cultural landscapes to the public.

46. Ability to work as a team member in the design and implementation of interpretation programs and tools, such as brochures, videos, and walking tours.

Training

47. Ability to initiate, manage, and deliver training programs.

48. Ability to serve as a professional mentor and technical supervisor for intern historical landscape architects.

49. Skill in conducting training regarding the application of current policies, guidelines, standards, and technical information to cultural landscape management.

Safety

50. Thorough knowledge of job safety, health considerations, and safety requirements for job assignments.

51. Thorough knowledge of NPS loss prevention guidelines and regulations.
Cultural Resources Stewardship Needs Assessment
Historical Landscape Architect - Developmental Level

The National Park Service has the responsibility of providing meaningful training and education for its employees. The purpose of this training is to ensure the basic missions of the Service and its individual units are met, while allowing employees to reach their personal career goals.

Please look at the same list again. This time consider how you rate your overall preparation (all sources) for these aspects of being a historical landscape architect. Please check the most appropriate response for each item. If the training competency does not apply to your present position, check the first box - N/A.

### Professional Discipline

52. A degree in landscape architecture from a program accredited by the Landscape Architecture Accreditation Board; at least one year of graduate study in landscape preservation and at least one year of full-time professional experience in landscape preservation projects OR two years of full-time experience in landscape preservation projects.

53. Ability to apply NPS policies, objectives, and design criteria necessary for research, planning, design development, and construction documentation, including reports, plans, specifications, and cost estimates for cultural landscape preservation.

54. Ability to apply the theories, principles, laws, practices and techniques of landscape architecture to the preservation of cultural landscapes.

55. Knowledge of allied fields, such as planning, architecture, archeology, and the natural resource sciences, necessary to conduct project reviews, supervise contracts, and provide technical assistance and information.
Preservation Law, Philosophy, and Practice

56. Knowledge of the origins, theories, principles, practices, and techniques of historic preservation, particularly as they apply to the preservation of cultural landscapes.

57. Knowledge of federal cultural resource preservation legislation, policies, guidelines, and standards, particularly the National Historic Preservation Act, the Secretary of the Interior’s Standards and Guidelines for Archeology and Historic Preservation, and National Park Service Management policies and guidelines.

58. Knowledge and understanding of related resource management disciplines, such as history, architecture, archeology, ethnography and the natural sciences to ensure their proper consideration in research, planning, and treatment.

59. Ability to interpret and apply current laws, policies, guidelines, standards, and technical information necessary to conduct project reviews, and provide technical assistance and information regarding cultural landscape management.

60. Ability to apply knowledge of current national issues and laws affecting historic properties, such as the Architectural Barriers Act, life safety, fire and health codes, and sustainable design in project work.

61. Skill in preparing and reviewing Section 106 compliance documents.

Research and Inventory

62. Ability to determine the necessity for historical research, develop suitable research designs, and conduct or oversee appropriate levels of documentary research and field investigation.
63. Ability to interpret and apply policies, guidelines, and standards in conducting basic and applied research, particularly the Secretary of the Interior’s Standards and Guidelines for Archeology and Historic Preservation and the National Register criteria.

64. Ability to conduct and supervise cultural landscape research, inventory, documentation, and analysis and evaluation based on accepted methodologies, techniques, criteria, standards, and guidelines.

65. Ability to prepare and supervise the preparation of reports, plans, specifications, and cost estimates to support planning for cultural landscape preservation, based on historical research, field investigations, and data analysis.

66. Skill at documenting research, inventory, documentation, and analysis and evaluation both graphically and in narrative form.

### Treatment and Preservation Maintenance

67. Knowledge of policies, standards, and guidelines related to the treatment of historic properties, particularly their application to cultural landscapes.

68. Knowledge of natural resource policies, standards, and guidelines and the interrelationship of cultural and natural resources in the treatment, management, and maintenance of cultural landscapes.

69. Knowledge of present construction practices and materials and their interaction with historic conditions sufficient to prescribe treatment and maintenance.
70. Ability to facilitate the integration of cultural and natural resource management issues in prescribing treatment and maintenance practices.

71. Ability to interpret and apply policies, standards, and guidelines in prescribing treatment and maintenance in a manner that protects both cultural and natural resource values.

72. Ability to prepare reports, plans, specifications, and cost estimates to support treatment and maintenance.

73. Ability to coordinate and carry out the implementation of treatment and maintenance projects including contract management.

74. Ability to participate in interdisciplinary activities regarding preservation planning and treatment projects.

75. Ability to incorporate necessary measures to protect historic and archeological resources in the implementation of treatment projects and maintenance practices.

76. Ability to work effectively with park operations responsible for cultural landscape management in developing treatment and maintenance solutions.

77. Ability to apply and integrate the Section 106 compliance process into treatment and maintenance projects and advise park operations regarding practices that avoid adverse actions.
Program and Project Management

-Program Management-

78. Thorough knowledge of the goals, objectives, initiatives of the Servicewide Cultural Landscape Program.

79. Ability to assist in ongoing strategic planning including developing and prioritizing program goals, objectives, and initiatives.

80. Ability to assist in long-term resource management planning regarding cultural landscape research, planning, and treatment.

81. Ability to act as a liaison for the cultural landscape program with other offices of the National Park Service, professional organizations, such as the American Society of Landscape Architects and the Alliance for Historic Landscape Preservation, academic institutions, and other private/public groups to share and obtain state-of-the-art information on cultural landscape preservation and professional practice.

82. Ability to develop partnerships to assist in accomplishing the goals and objectives of the cultural landscape program.

-Project Management-

83. Knowledge of the legal and administrative requirements of services and construction contracts and cooperative agreement law, policies, guidelines, and management.

84. Knowledge of the legislation and agency requirements of Historic Property Leasing, Agricultural Leasing, Special Use Permits, and Partnership Agreements.
85. Ability to work cooperatively as a team with professionals in allied fields, such as planning, architecture, archeology, and the natural resource sciences, and ability to serve as team leader on a project.

86. Ability to provide review of complex projects and recommend agency positions and direction.

87. Ability to organize and coordinate complex projects involving multiple disciplines.

88. Ability to serve as the Contracting Officer's Technical Representative in architectural/engineering services contracts, and construction contracts.

89. Skill in interpreting and applying policies, standards, and guidelines in a manner that protects both cultural and natural resource values.

90. Skill in oversight and technical review of products produced by cooperators and contractors.

91. Skill in conducting and supervising Section 106 compliance procedures and participating in conflict resolution.

Writing and Communication

92. Ability to make presentations and prepare papers regarding cultural landscape management for professional conferences and journals.

93. Skill in articulating the role of cultural landscape preservation in the mission of the National Park Service verbally, graphically, and in writing.

94. Skill in articulating complex landscape management issues verbally, graphically, and in writing.
95. Skill in using standard computer software programs and the ability to select off-the-shelf software to improve written and graphic communication.

96. Thorough knowledge of the techniques for interpreting the significance and character of cultural landscapes to the public.

97. Ability to work as a team member in the design and implementation of interpretation programs and tools, such as brochures, videos, and walking tours.

**Training**

98. Ability to initiate, manage, and deliver training programs.

99. Ability to serve as a professional mentor and technical supervisor for intern historical landscape architects.

100. Skill in conducting training regarding the application of current policies, guidelines, standards, and technical information to cultural landscape management.

**Safety**

101. Thorough knowledge of job safety, health considerations, and safety requirements for job assignments.

102. Thorough knowledge of NPS loss prevention guidelines and regulations.
Demographics

103. Age (years):_____

104. Gender: □ Female □ Male

105. Race/National Origin:

□ American Indian or Alaskan Native □ Hispanic
□ Black (Not of Hispanic Origin) □ Asian or Pacific Islander
□ White (Not of Hispanic Origin) □ Other (Please Specify):

106. Do you have a disability? □ Yes □ No

107. Current GS level ______

108. Number of years served in the National Park Service?_____

109. Number of years in current position?_____

110. Education (Circle the highest number of years of formal education completed)

<12  12  13  14  15  16  17  18  18+

111. If you hold a college degree(s), please complete the following questions regarding the type of degree(s) and major field(s) of study:

Bachelor’s:

Type of Degree (i.e., B.S., B.A., etc.)________________________

Major Field of Study________________________________________

Master’s:

Type of Degree (i.e., M.S., M.A., etc.)________________________

Major Field of Study________________________________________

Doctorate:

Type of Degree (i.e., Ph.D., Ed.D., etc.)________________________

Major Field of Study________________________________________
The following list of degrees, as reported by the respondents, has been condensed for the ease of compilation. Some specific degree titles do not appear due to categorization under a more general term.

**HISTORICAL LANDSCAPE ARCHITECT – DEVELOPMENTAL LEVEL**

**UNDERGRADUATE [A.S., B.S. & B.A.]**

- American Studies 01
- Anthropology/Geology 01
- Agriculture 01
- English 01
- Horticulture 02
- Humanities 01
- Landscape Architecture 07
- Parks & Recreation Management 01
- Plant Science 01
- Secondary Education/German 01

**GRADUATE [M.S. & M.A.]**

- American Studies 01
- Landscape Architecture 09
- Material Culture 01

**DOCTORATE [Ph.D. & J.D.]**

- Environmental History 01
National Park Service
Cultural Resources Stewardship Needs Assessment
Historical Landscape Architect - Full Performance Level

In the performance of your present job as a historical landscape architect, how important are the following professional competencies? The essential competencies for historical landscape architect can be found in the NPS Tracking Kit at the "Learning Place" website: www.nps.gov/training/npsonly/npescom.htm. Please check the most appropriate response for each item.

### Professional Discipline

1. A graduate degree in Landscape Architecture from a program accredited by the Landscape Architecture Accreditation Board; a license to practice landscape architecture or has completed all prerequisites to take licensing exam; and at least two years of full-time professional experience in landscape preservation projects OR two years of full-time experience in landscape architecture from a program accredited by the Landscape Architecture Accreditation Board; a license to practice landscape architecture or has completed all prerequisites to take licensing exam; at least six years of full-time professional experience in landscape preservation projects.

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2. Skilled in applying National Park Service policies, objectives, and design criteria necessary for research, planning, design development, and construction documentation, including reports, plans, specifications, and cost estimates for cultural landscape preservation.

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3. Skilled in applying the theories, principles, laws, practices, and techniques of landscape architecture to the preservation of cultural landscapes.

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4. Skilled in facilitating the input of allied fields, such as planning, architecture, archeology, and the natural resource sciences in formulating agency positions, conducting project reviews, supervising contracts, and providing technical assistance and information.

**Preservation Law, Philosophy, and Practice**

5. Thorough knowledge of the origins, theories, principles, practices, and techniques of historic preservation, particularly as they apply to the preservation of cultural landscapes.

6. Thorough knowledge of federal cultural resource preservation legislation, policies, guidelines, and standards, particularly the National Historic Preservation Act, the Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation, and National Park Service Management Policies and guidelines.

7. Expertise in the interpretation and application of current laws, policies, guidelines, standards, and technical information necessary to formulate agency positions, conduct project reviews, and provide technical assistance and information regarding cultural landscape management.

8. Skill in applying knowledge of current national issues and laws affecting historic properties, such as the Architectural Barriers Act, life safety, fire and health codes, and sustainable design in project and program management.

9. Skill in incorporating related resource management disciplines, such as history, architecture, archeology, ethnography, and the natural sciences in project and program management to ensure their proper consideration in research, planning, and treatment.
10. Expertise in the Section 106 compliance process and skill in preparing and reviewing compliance documentation.

Research and Inventory

11. Skill in determining the necessity for historical research developing suitable research designs, and conducting or overseeing appropriate levels of documentary research and field investigation.

12. Expertise in the interpretation and application of policies, guidelines, and standards for conducting basic and applied research, particularly the Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation and the National Register criteria.

13. Skill in conducting and supervising cultural landscape research, inventory, documentation, and analysis and evaluation based on accepted methodologies and techniques and developing unprecedented methodologies as appropriate.

14. Skill in preparing and supervising the preparation of reports, plans, specifications, and cost estimates to support planning for cultural landscape preservation, based on historical research, field investigations, and data analysis.

Treatment and Preservation Maintenance

15. Expertise in the application of cultural and natural resource policies, standards, and guidelines in prescribing treatment and maintenance in a manner that protects both cultural and natural resource values.
16. Skill in facilitating interdisciplinary participation, review, and/or comment in prescribing treatment and maintenance practices in order to integrate all relevant cultural and natural resource management issues.

17. Skill in incorporating present construction practices and materials with historic conditions in prescribing treatment and maintenance.

18. Skill in incorporating measures which protect historic and archeological evidence in the implementation of treatment projects and maintenance practices.

19. Skill in preparing and supervising the preparation of reports, plans, specifications, and cost estimates to support treatment and maintenance.

20. Skill in coordinating and executing the implementation of treatment and maintenance projects including contract management.

21. Skill in working effectively with park operations responsible for cultural landscape management in developing treatment and maintenance solutions.

22. Ability to evaluate and mitigate the impact of maintenance practices on cultural landscapes.

Program and Project Management

-Program Management-

23. Skill in conducting long-range planning and budget formulation based on a knowledge of the National Park Service budget process.
24. Ability to facilitate ongoing strategic planning including developing and prioritizing program goals, objectives, and initiatives.

25. Skill in coordinating cultural landscape program activities with other park operational programs, such as historic structures, integrated pest management, and maintenance management.

26. Skill in being a liaison for the cultural landscape program with other offices of the National Park Service, professional organizations, such as the American Society of Landscape Architects and the Alliance for Historic Landscape Preservation, academic institutions, and other private/public groups to share and obtain state-of-the-art information on cultural landscape preservation and professional practice.

27. Skill in developing proposals, cooperative agreements, memoranda of understanding with appropriate organizations to carry out the objectives of the cultural landscape program.

-Project Management-

28. Expertise in the interpretation and application of cultural and natural resource policies, standards, and guidelines in a manner which protects both cultural and natural resource values.

29. Ability to assist in the development and monitoring of Historic Property Leasing, Agricultural Leasing, Special Use Permits, and Partnership Agreements based on legislative and agency requirements.

30. Skill in interdisciplinary team work with professionals in allied fields such as planning, architecture, archeology, and the natural resource sciences and the ability to serve as team leader on a project.
31. Skill in providing expert review of complex projects and articulating clear agency positions and direction.

32. Skill in serving as the Contracting Officer's Technical Representative in architectural/engineering services contracts and construction contracts.

33. Skill in oversight and technical review of products produced by cooperators and contractors.

34. Extensive knowledge of Section 106 compliance laws, regulations, and procedures.

35. Skill in conducting and supervising Section 106 compliance procedures and participating in conflict resolution.

**Writing and Communication**

36. Skill in articulating the role of cultural landscape preservation in the mission of the National Park Service verbally, graphically, and in writing.

37. Skill in articulating complex landscape management issues verbally, graphically, and in writing.

38. Skill in using standard computer software programs and the ability to select off-the-shelf software to improve written and graphic communication.

39. Skill in making presentations and preparing papers regarding cultural landscape management for professional conferences and journals.
40. Ability to oversee the development and implementation of effective strategies to interpret the significance and character of cultural landscapes to the public.

Training

41. Expertise in conducting training regarding the application of current policies, guidelines, standards, and technical information to cultural landscape management.

42. Skill in initiating, managing, and delivering training programs.

43. Ability to serve as a professional mentor and technical supervisor for intern and developing historical landscape architects.

Safety

44. Ability to identify and correct job safety and health hazards, instruct employees on safety requirements for job assignments, and report loss incidents in accordance with agency regulations.

45. Skill in interpreting and applying NPS loss prevention guidelines and regulations to specific work environments.
Cultural Resources Stewardship Needs Assessment
Historical Landscape Architect - Full Performance Level

The National Park Service has the responsibility of providing meaningful training and education for its employees. The purpose of this training is to ensure the basic missions of the Service and its individual units are met, while allowing employees to reach their personal career goals.

Please look at the same list again. This time consider how you rate your overall preparation (all sources) for these aspects of being a historical landscape architect. Please check the most appropriate response for each item. If the training competency does not apply to your present position, check the first box - N/A.

Professional Discipline

46. A graduate degree in Landscape Architecture from a program accredited by the Landscape Architecture Accreditation Board; a license to practice landscape architecture or has completed all prerequisites to take licensing exam; and at least two years of full-time professional experience in landscape preservation projects OR two years of full-time experience in landscape architecture from a program accredited by the Landscape Architecture Accreditation Board; a license to practice landscape architecture or has completed all prerequisites to take licensing exam; at least six years of full-time professional experience in landscape preservation projects.

47. Skilled in applying National Park Service policies, objectives, and design criteria necessary for research, planning, design development, and construction documentation, including reports, plans, specifications, and cost estimates for cultural landscape preservation.

48. Skilled in applying the theories, principles, laws, practices, and techniques of landscape architecture to the preservation of cultural landscapes.
49. Skilled in facilitating the input of allied fields, such as planning, architecture, archeology, and the natural resource sciences in formulating agency positions, conducting project reviews, supervising contracts, and providing technical assistance and information.

**Preservation Law, Philosophy, and Practice**

50. Thorough knowledge of the origins, theories, principles, practices, and techniques of historic preservation, particularly as they apply to the preservation of cultural landscapes.

51. Thorough knowledge of federal cultural resource preservation legislation, policies, guidelines, and standards, particularly the National Historic Preservation Act, the Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation, and National Park Service Management Policies and guidelines.

52. Expertise in the interpretation and application of current laws, policies, guidelines, standards, and technical information necessary to formulate agency positions, conduct project reviews, and provide technical assistance and information regarding cultural landscape management.

53. Skill in applying knowledge of current national issues and laws affecting historic properties, such as the Architectural Barriers Act, life safety, fire and health codes, and sustainable design in project and program management.

54. Skill in incorporating related resource management disciplines, such as history, architecture, archeology, ethnography, and the natural sciences in project and program management to ensure their proper consideration in research, planning, and treatment.
55. Expertise in the Section 106 compliance process and skill in preparing and reviewing compliance documentation.

Research and Inventory

56. Skill in determining the necessity for historical research developing suitable research designs, and conducting or overseeing appropriate levels of documentary research and field investigation.

57. Expertise in the interpretation and application of policies, guidelines, and standards for conducting basic and applied research, particularly the Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation and the National Register criteria.

58. Skill in conducting and supervising cultural landscape research, inventory, documentation, and analysis and evaluation based on accepted methodologies and techniques and developing unprecedented methodologies as appropriate.

59. Skill in preparing and supervising the preparation of reports, plans, specifications, and cost estimates to support planning for cultural landscape preservation, based on historical research, field investigations, and data analysis.

Treatment and Preservation Maintenance

60. Expertise in the application of cultural and natural resource policies, standards, and guidelines in prescribing treatment and maintenance in a manner that protects both cultural and natural resource values.
61. Skill in facilitating interdisciplinary participation, review, and/or comment in prescribing treatment and maintenance practices in order to integrate all relevant cultural and natural resource management issues.

62. Skill in incorporating present construction practices and materials with historic conditions in prescribing treatment and maintenance.

63. Skill in incorporating measures which protect historic and archeological evidence in the implementation of treatment projects and maintenance practices.

64. Skill in preparing and supervising the preparation of reports, plans, specifications, and cost estimates to support treatment and maintenance.

65. Skill in coordinating and executing the implementation of treatment and maintenance projects including contract management.

66. Skill in working effectively with park operations responsible for cultural landscape management in developing treatment and maintenance solutions.

67. Ability to evaluate and mitigate the impact of maintenance practices on cultural landscapes.

Program and Project Management

-Program Management-

68. Skill in conducting long-range planning and budget formulation based on a knowledge of the National Park Service budget process.
69. Ability to facilitate ongoing strategic planning including developing and prioritizing program goals, objectives, and initiatives.

70. Skill in coordinating cultural landscape program activities with other park operational programs, such as historic structures, integrated pest management, and maintenance management.

71. Skill in being a liaison for the cultural landscape program with other offices of the National Park Service, professional organizations, such as the American Society of Landscape Architects and the Alliance for Historic Landscape Preservation, academic institutions, and other private/public groups to share and obtain state-of-the-art information on cultural landscape preservation and professional practice.

72. Skill in developing proposals, cooperative agreements, memoranda of understanding with appropriate organizations to carry out the objectives of the cultural landscape program.

-Project Management-

73. Expertise in the interpretation and application of cultural and natural resource policies, standards, and guidelines in a manner which protects both cultural and natural resource values.

74. Ability to assist in the development and monitoring of Historic Property Leasing, Agricultural Leasing, Special Use Permits, and Partnership Agreements based on legislative and agency requirements.

75. Skill in interdisciplinary team work with professionals in allied fields such as planning, architecture, and archeology and the natural resource sciences and the ability to serve as team leader on a project.
76. Skill in providing expert review of complex projects and articulating clear agency positions and direction.

77. Skill in serving as the Contracting Officer’s Technical Representative in architectural/engineering services contracts and construction contracts.

78. Skill in oversight and technical review of products produced by cooperators and contractors.

79. Extensive knowledge of Section 106 compliance laws, regulations, and procedures.

80. Skill in conducting and supervising Section 106 compliance procedures and participating in conflict resolution.

**Writing and Communication**

81. Skill in articulating the role of cultural landscape preservation in the mission of the National Park Service verbally, graphically, and in writing.

82. Skill in articulating complex landscape management issues verbally, graphically, and in writing.

83. Skill in using standard computer software programs and the ability to select off-the-shelf software to improve written and graphic communication.

84. Skill in making presentations and preparing papers regarding cultural landscape management for professional conferences and journals.
85. Ability to oversee the development and implementation of effective strategies to interpret the significance and character of cultural landscapes to the public.

| Training | | | | | | | |
|----------| | | | | | | | |

86. Expertise in conducting training regarding the application of current policies, guidelines, standards and technical information to cultural landscape management.

| Safety | | | | | | | | |
|--------| | | | | | | | |

87. Skill in initiating, managing, and delivering training programs.

88. Ability to serve as a professional mentor and technical supervisor for intern and developing historical landscape architects.

| Safety | | | | | | | | |
|--------| | | | | | | | |

89. Ability to identify and correct job safety and health hazards, instruct employees on safety requirements for job assignments, and report loss incidents in accordance with agency regulations.

| Safety | | | | | | | | |
|--------| | | | | | | | |

90. Skill in interpreting and applying NPS loss prevention guidelines and regulations to specific work environments.
Demographics

91. Age (years): ____

92. Gender:  1 Female  2 Male

93. Race/National Origin:
   1 American Indian or Alaskan Native  2 Hispanic
   3 Black (Not of Hispanic Origin)  4 Asian or Pacific Islander
   5 White (Not of Hispanic Origin)  6 Other (Please Specify):

94. Do you have a disability?  1 Yes  2 No

95. Current GS level ______

96. Number of years served in the National Park Service?_______

97. Number of years in current position?_______

98. Education (Circle the highest number of years of formal education completed)
   <12  12  13  14  15  16  17  18  18+

99. If you hold a college degree(s), please complete the following questions regarding the type of degree(s) and major field(s) of study:

   Bachelor's:
   Type of Degree (i.e., B.S., B.A., etc.)__________________________
   Major Field of Study_________________________________________

   Master's:
   Type of Degree (i.e., M.S., M.A., etc.)_________________________
   Major Field of Study_________________________________________

   Doctorate:
   Type of Degree (i.e., Ph.D., Ed.D., etc.)_________________________
   Major Field of Study_________________________________________
The following list of degrees, as reported by the respondents, has been condensed for the ease of compilation. Some specific degree titles do not appear due to categorization under a more general term.

**HISTORICAL LANDSCAPE ARCHITECT – FULL PERFORMANCE LEVEL**

**UNDERGRADUATE [B.S. & B.A.]**

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**GRADUATE [M.S. & M.A.]**

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