The National Science Foundation (NSF) encourages awardees applying for Small Business Innovation Research (SBIR) awards to justify their proposed employee salaries by using the Bureau of Labor Statistics (BLS) Wage Data.

NSF strives to make sure that funds allocated for the SBIR program are used efficiently. Typically, NSF will review proposed salaries to ensure that they are in line with market standards. Awardees that propose salaries significantly greater than what could be expected in the market may be subject to increased scrutiny from NSF. In addition, salaries that are significantly lower than what the market would pay may be concerning, as the awardee could have difficulty attracting and retaining top talent.

The BLS maintains extensive databases of wage data broken down by state, region, and other characteristics. It is considered to be the standard for wage and salary data, and is used widely by the private sector and Federal government. The BLS data is available here: http://www.bls.gov/bls/blswage.htm.

This guide is intended to enable SBIR awardees to verify that their salaries are in line with market standards. Although BLS has several datasets available as of November, 2014, this guide uses the most up to date data. There is also older and therefore less relevant data and tools available on the BLS site. Specifically, this guide will show awardees how to:

1. Search for appropriate BLS job descriptions to ensure that salary comparisons are made using the most appropriate job titles
2. Use the BLS data to validate proposed salaries
3. Check proposed salaries against other sources.

1. **Search for BLS job codes and descriptions.**
   
a. Before looking up salary data, awardees should locate their proposed job descriptions in the BLS Standard Occupational Classification (SOC) System. These classifications will help awardees confirm that they use the most appropriate job description when searching for BLS salary data.

   b. The SOC data is located here: http://www.bls.gov/soc/#materials. The first circled link under “2010 SOC Definitions” will bring up the complete BLS job description list, sorted by job code. The data can also be accessed alphabetically by job title in the second circled link. For our example, we will use the first link.
c. For example, if an awardee thinks that his job title should be “Web Developer,” he can look up the BLS definition by clicking “PDF” in the first circled link to ensure that it accurately describes his day to day responsibilities:

**15-1134 Web Developers**

Design, create, and modify Web sites. Analyze user needs to implement Web site content, graphics, performance, and capacity. May integrate Web sites with other computer applications. May convert written, graphic, audio, and video components to compatible Web formats by using software designed to facilitate the creation of Web and multimedia content. Excludes “Multimedia Artists and Animators” (27-1014).

*Illustrative examples: Internet Developer, Intranet Developer, Web Designer*

d. After clearly identifying proposed job descriptions, the awardee can look up wage and information within the BLS data.

2. **Use BLS data to validate salaries.**

a. The BLS home page can be accessed by clicking here: [http://www.bls.gov/bls/blswage.htm](http://www.bls.gov/bls/blswage.htm)
b. The most useful links, with the most current data, are circled in green. “Wage Data by Metropolitan Area” should be the first one used by awardees, as it includes data on nearly every major area of the country. “Wage Data by State” should be used only if an awardee’s employment location is not within a metropolitan area.

*Note:* Data available in the other links, such as “Wage Data by Region for Census Divisions,” is generally either outdated (from 2009-10) or too broad (taken at the national level) to be accurate.

**Accessing the Metropolitan Area Data**

This example will walk through the process of looking up salary information, using a Web Developer in Los Angeles, CA for illustrative purposes.

*Note:* The processes used to look up State Data and Metropolitan Area Data are the same.

a. By clicking the link “For 375 metropolitan statistical areas (MSAs)…” ([http://www.bls.gov/oes/current/oessrcma.htm](http://www.bls.gov/oes/current/oessrcma.htm)) you will be re-directed to the following page:
b. Click on “Los Angeles” located under “California:”

```
California
- Bakersfield-Delano, CA
- Bakersfield, CA
- El Centro, CA
- Escondido, CA
- Los Angeles-Long Beach-Glendale, CA Metropolitan Division
- Los Angeles-Los Angeles-Long Beach-Glendale, CA Metropolitan Division
- Los Angeles-Los Angeles-Long Beach-Oxnard, CA Metropolitan Division
- Madera-Chowchilla, CA
- Merced, CA
- Modesto, CA
- Napa, CA
- Oxnard-Thousand Oaks-Ventura, CA
- Redding, CA
- Fresno-Riverside-Shafter-Bakersfield, CA Metropolitan Division
- Fresno-Riverside-Shafter-Riverside-Ontario, CA
- Sacramento--Alder-Arden-Arcade-Roseville, CA
- Salinas, CA
- San Diego-Carlsbad-San Marcos, CA
- San Francisco-Oakland-Fremont, CA
- San Francisco-Peninsula-Santa Clara, CA Metropolitan Division
- San Francisco-San Mateo-Palo Alto, CA Metropolitan Division
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c. Then select “Computer and Mathematical Occupations” (SOC category 15-0000). We know this to be the correct category for the “Web Developers” job description because the first two digits of its SOC job number (15-1134) are the same as for the “Computer and Mathematical Occupations” job category:
d. From there, locate and click on “Web Developers:”

<table>
<thead>
<tr>
<th>Occupation code</th>
<th>Occupation title (click on the occupation title to view its profile)</th>
<th>Level</th>
<th>Employment</th>
<th>Employment RSE</th>
<th>Employment per 1,000 Jobs</th>
<th>Location quotient</th>
<th>Median hourly wage</th>
<th>Mean hourly wage</th>
<th>Annual mean wage</th>
<th>Mean wage RSE</th>
</tr>
</thead>
<tbody>
<tr>
<td>15-1132</td>
<td>Software Developers, Applications</td>
<td>detail</td>
<td>24,890</td>
<td>6.0%</td>
<td>4.585</td>
<td>0.94</td>
<td>$47.51</td>
<td>$48.33</td>
<td>$100,530</td>
<td>1.4%</td>
</tr>
<tr>
<td>15-1133</td>
<td>Software Developers, System Software</td>
<td>detail</td>
<td>20,240</td>
<td>11.3%</td>
<td>3.729</td>
<td>1.52</td>
<td>$54.63</td>
<td>$55.37</td>
<td>$115,160</td>
<td>1.4%</td>
</tr>
<tr>
<td>15-1134</td>
<td>Web Developers</td>
<td>detail</td>
<td>6,180</td>
<td>6.8%</td>
<td>1.139</td>
<td>1.34</td>
<td>$31.56</td>
<td>$32.27</td>
<td>$67,120</td>
<td>2.0%</td>
</tr>
<tr>
<td>15-1141</td>
<td>Database Administrators</td>
<td>detail</td>
<td>3,560</td>
<td>4.5%</td>
<td>0.655</td>
<td>0.76</td>
<td>$42.03</td>
<td>$42.42</td>
<td>$88,240</td>
<td>1.5%</td>
</tr>
</tbody>
</table>

From the resulting page yields median and percentile wage data for both annual salaries and hourly wages:
These estimates can be used by awardees to determine and justify the salary for an occupation in a given area. If the proposed annualized salary exceeds these estimates, additional justification may be requested by NSF when they review the SBIR proposal.

To validate their proposed salaries, awardees should try to find the characteristics (such as education level, prior professional experience, or years in the profession) of the salary range that they intend to pay. For example, if an awardee thinks that an employee is deserving of the 90th percentile salary for his occupation, the awardee should verify that the employee possesses the education and experience commensurate with that salary profile.

3. **Check proposed salaries against other sources.**

Awardees may find a variety of other sources helpful to validate salaries, depending on on their career field. Occupation societies and associations in particular often publish salary surveys that describe the characteristics of different salary levels. Below is just a sample of sources that awardees may find helpful validating their salaries:
**Note:** Awardees should be able to validate proposed salaries using BLS information. This section provides additional options for supplemental information; NSF does not expect or require that awardees purchase third party salary reports.

- **Sources that may be useful to employees in any industry:**
  - PayScale.com ([www.payscale.com](http://www.payscale.com)): Allows users to input their education, years of experience, and geographic location to find the job characteristics and salary percentiles for the occupation of their choice. Although there is a great deal of free data on the website, there are also more thorough reports available for purchase.
  - Monster’s Salary Center ([http://monster.salary.com/SalaryWizard/LayoutScripts/Swzl_NewSearch.aspx](http://monster.salary.com/SalaryWizard/LayoutScripts/Swzl_NewSearch.aspx)): Allows users to access limited free reports and more extensive paid reports on a variety of occupations.
  - Salary.com ([www.salary.com](http://www.salary.com)): Displays income distributions for a variety of jobs for free, and also offers more extensive paid reports.

- **Sources that may be useful for employees in certain industries:**
  - The Engineering Income and Salary Survey, published by the American Society of Civil Engineers ([https://www.asme.org/getmedia/788e990f-99f5-4062-801c-d2ef0586b52d/32673_Engineering_Income_Salary_Survey.aspx](https://www.asme.org/getmedia/788e990f-99f5-4062-801c-d2ef0586b52d/32673_Engineering_Income_Salary_Survey.aspx)): This survey provides extensive percentile salary data for a variety of different engineering fields based on characteristics such as number of years of work experience and education level. Below is just one of the tables that the survey includes:

<table>
<thead>
<tr>
<th></th>
<th>All Respondents</th>
<th>Full-Time Salaried Only</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td># of Responses</td>
<td>Mean</td>
</tr>
<tr>
<td>Under 1 year</td>
<td>366</td>
<td>56,765</td>
</tr>
<tr>
<td>1–2 years</td>
<td>760</td>
<td>60,668</td>
</tr>
<tr>
<td>3–4 years</td>
<td>1,161</td>
<td>67,325</td>
</tr>
<tr>
<td>5–9 years</td>
<td>2,319</td>
<td>78,457</td>
</tr>
<tr>
<td>10–14 years</td>
<td>1,764</td>
<td>95,763</td>
</tr>
<tr>
<td>15–19 years</td>
<td>1,323</td>
<td>111,621</td>
</tr>
<tr>
<td>20–24 years</td>
<td>1,802</td>
<td>123,267</td>
</tr>
<tr>
<td>25 or more years</td>
<td>3,781</td>
<td>138,542</td>
</tr>
</tbody>
</table>

  - American Institute of Chemical Engineers members have access to a Salary Survey ([http://www.aiche.org/resources/publications/cep/2013/june/2013-aiche-salary-survey](http://www.aiche.org/resources/publications/cep/2013/june/2013-aiche-salary-survey)).
  - The American Planning Association’s Salary Survey Summary ([https://www.planning.org/salary/summary.htm](https://www.planning.org/salary/summary.htm)): This survey describes the characteristics of salaries earned by urban and regional planners.
  - The Project Management Institute’s Salary Survey ([http://stlpmi.org/downloads/PMI_SalarySurvey_7thed.pdf](http://stlpmi.org/downloads/PMI_SalarySurvey_7thed.pdf)): This survey provides very detailed information on project manager salaries based on skills, experience, and location.