2020-2021 National Environmental Health Science and Protection Accreditation Council (EHAC) Undergraduate Degree Programs Outcome Assessment Report

Compiled by
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I. Introduction

This report details analysis of the data provided by former undergraduates of programs seeking reaccreditation during the 2020-2021 academic year. There were no responses from employee Supervisors for 2020.

II. Background

EHAC Undergraduate Requirements Section VI. Reporting Obligations of Accredited and Pre-accredited Programs Part D. Program Outcomes Assessment Survey states that:

> "At the time of reaccreditation, the institution shall survey program graduates and employers via the Council's outcome assessment tool. All graduates since the last accreditation shall be in the pool of those to be surveyed. The completed tools shall be gathered by the institution and forwarded to the Executive Director of the Council six months prior to the annual meeting of the Council. The Council will supply a summary of the information gathered to all accredited programs on an annual basis.
>
> The purpose of this survey is to determine the adequacy of the accreditation process to the needs of the professional practice of environmental health. The information gathered by an institution through the outcome assessment process will not be used as part of the evaluation review for reaccreditation purposes for a given institution. The Council will use the compiled information from all institutions undergoing reaccreditation to evaluate and consider changes to the requirements of accreditation."

The outcome assessment tool consists of two surveys conducted via surveymonkey.com, one for current employees and the other for their supervisors. It is distributed to the reaccreditation candidate Program Directors for distribution to former students. The graduates then provide the survey link to their supervisors for survey completion.

III. Survey context and Summary

EHAC's core mission is to accredit Environmental Health (EH) Programs that provide a scientifically rigorous and practical based education, which prepares graduates to enter the EH field "work force ready" and prepared to problem solve using critical thinking skills acquired during their university education. Toward this end, EHAC is continuously identifying strengths and weaknesses related to graduates successfully entering and progressing in the EH field of their choice. Survey responses from both graduates employed in the EH field (employees) and their supervisors assist EHAC in assessing and adapting Undergraduate Requirements and Graduate Guidelines for accreditation to the ever-evolving arena of Environmental Health.

Questions for both employees and their supervisors focus on assessing the adequacy and effectiveness of an employee's knowledge, skills and abilities related to their EH job, with employees conducting self-assessments and supervisors evaluating their current employees.

The following report provides a graphic representation of the results of the surveys.

Table 1 presents the EHAC accredited undergraduate degree program going through the 2020-2021 reaccreditation process, the number of employee responses and their dates of graduation, and the number of supervisor responses. There were eight total undergraduate respondents to the survey. Four respondents are currently employed in EH related professions and are the focus of this report. There were no supervisor responses to the 2020 Outcome Assessment Survey.

Table 1. 2020-2021 Outcome Assessment Respondents

Re-accreditation Applicants	Next Accreditation Review	Initial Accreditation Year	Graduating Classes Reflected	Number of Employee Respondents (working in the EH field)	Number of Supervisor Respondents
State University of New York, Environmental Science and Forestry	2021	2017	2017, 2020	4	0
Totals				**4**	**0**

IV. Employee Survey Results

A. Employee Skills

Charts 1-3 present employee self-assessments of general job skills, interpersonal office skills and skills related to interpreting data. Most employees rate themselves proficient, very or most proficient among these categories. A few employees report challenges in the areas of:

- Public Speaking;
- Technical Writing;
- Working in a team setting;
- Leadership Skills;
- Conducting a statistical analysis and interpreting data; and
- Applying research methods and problem solving

Employees rate themselves most highly in the EH Specialty area of Toxicology, followed by Risk Management and Communication, and Epidemiology (Chart 4). However, respondents also report challenges in epidemiology and toxicology (Chart 4).

Chart 1.

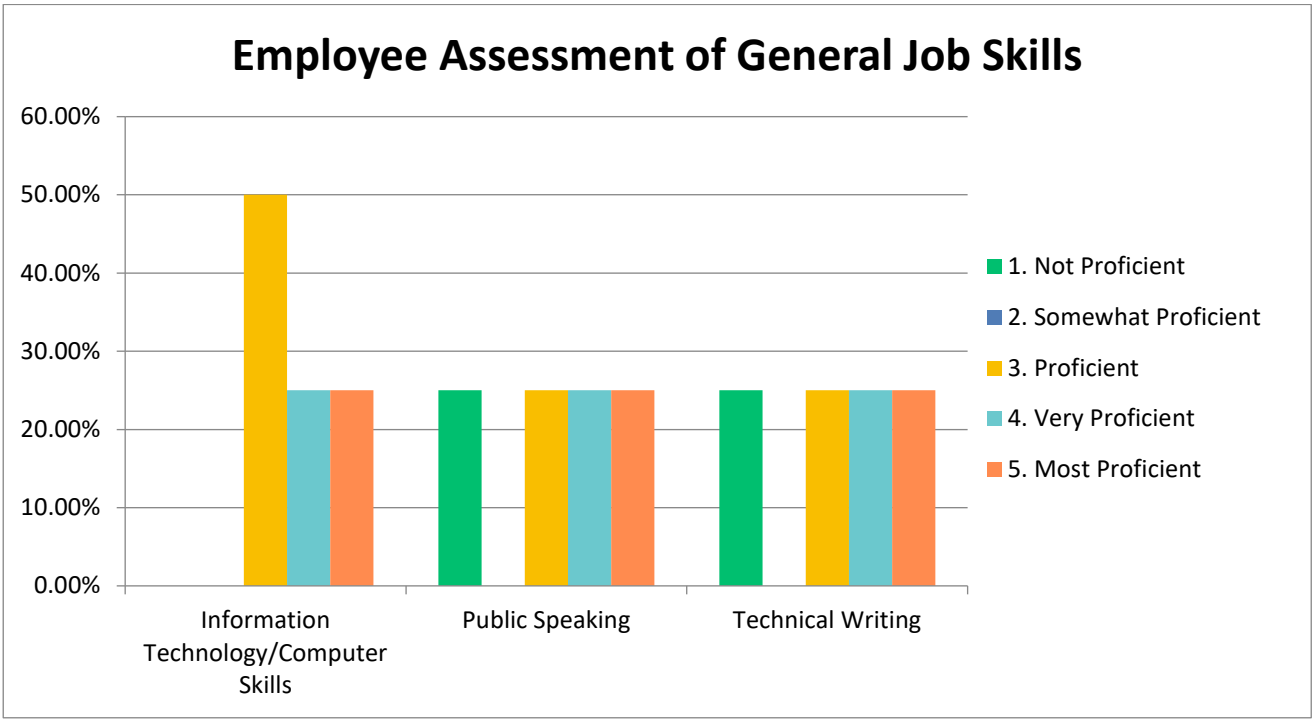


Chart 2.

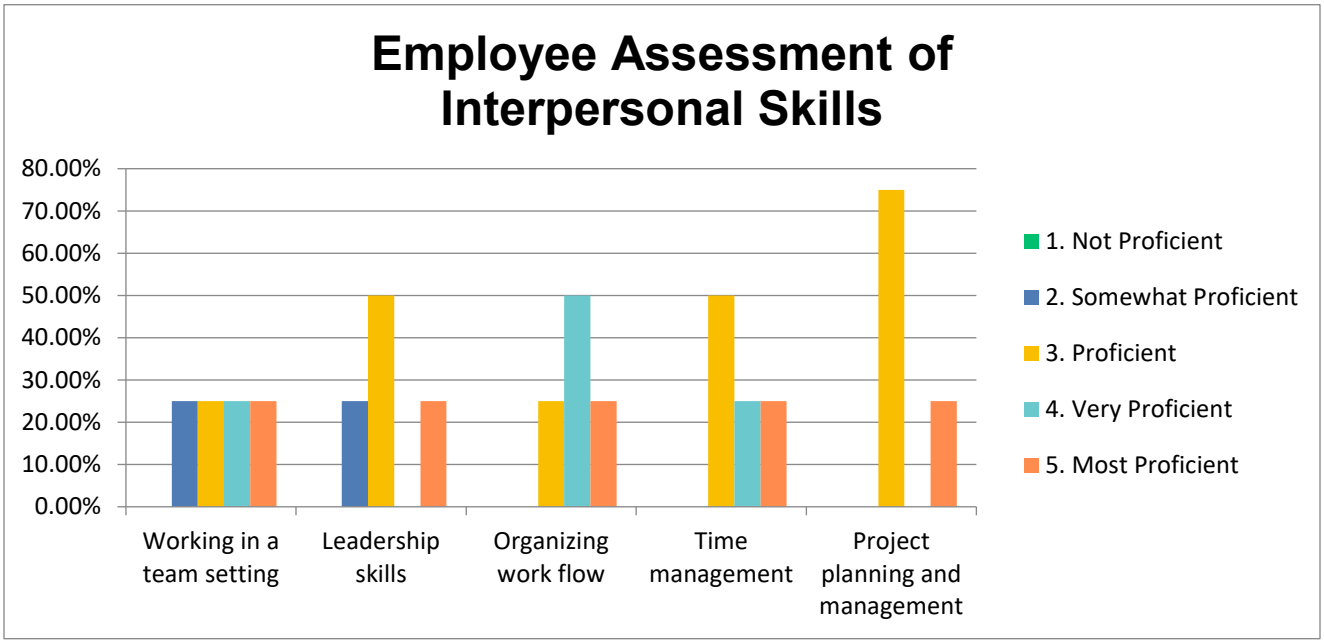


Chart 3.

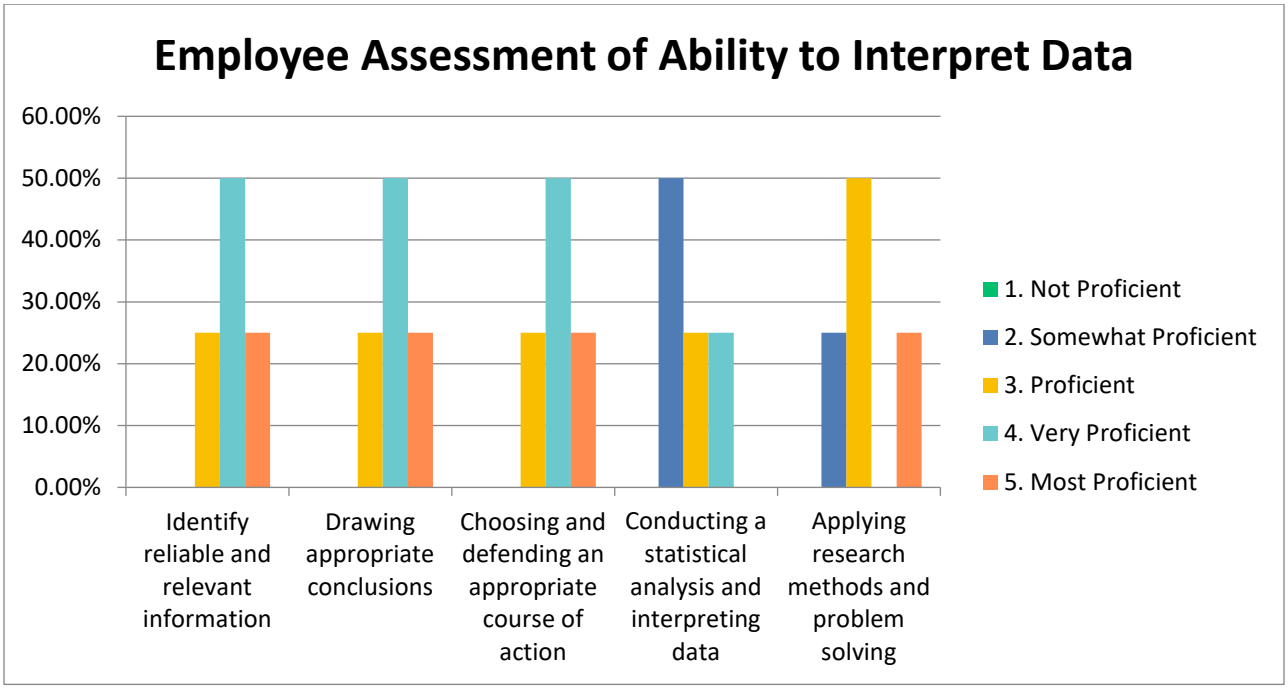
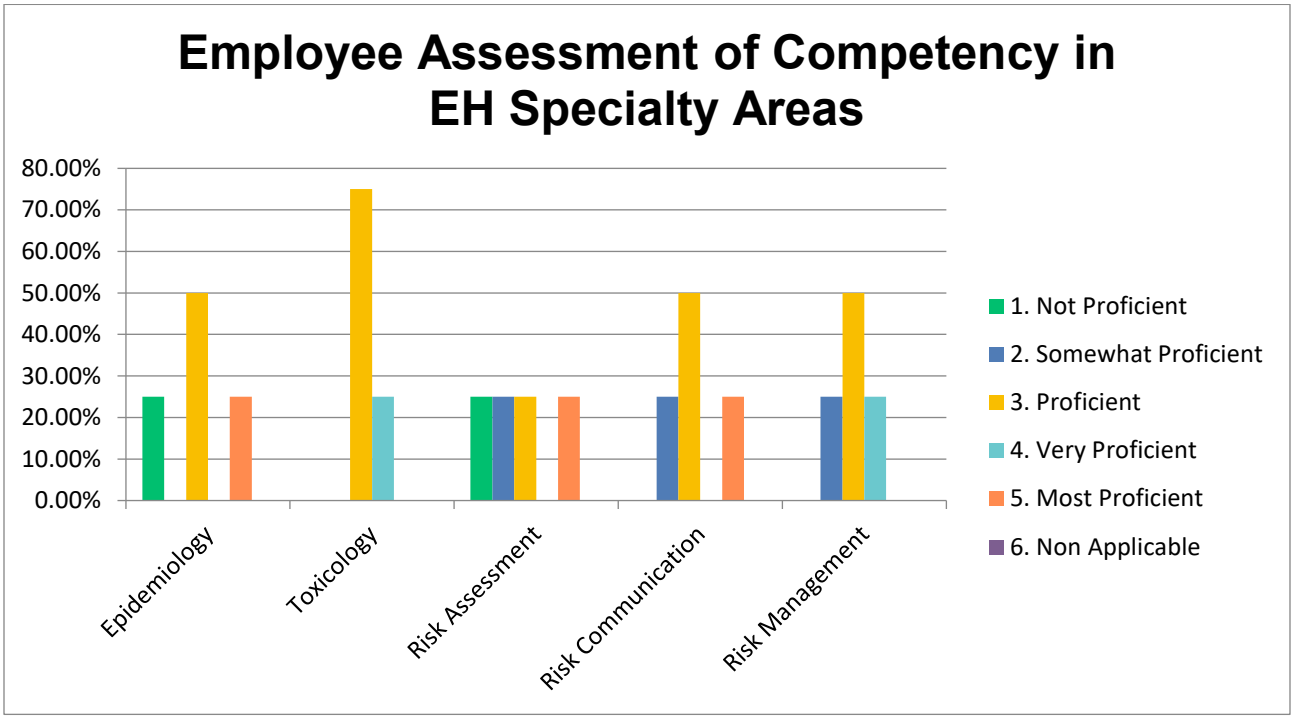


Chart 4.



B. Course Relevance

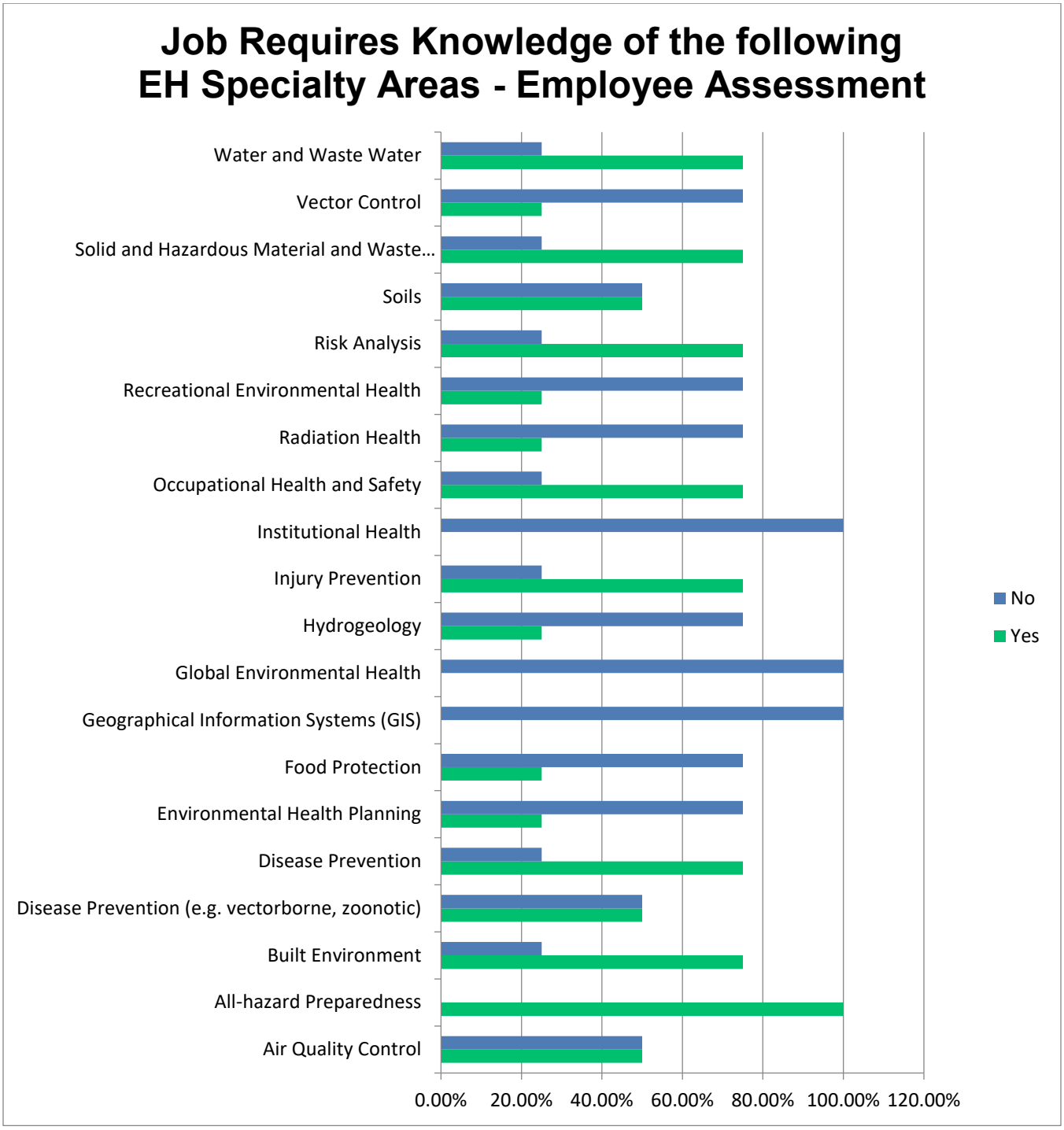
Employee respondents were asked to answer yes or no if their job requires knowledge in the following areas (Chart 5). The EH specialty areas cited as necessary by at least 50% of employees included:

- Air Quality Control
- All Hazard Preparedness;
- Built Environment
- Disease Prevention (e.g. vectorborne, zoonotic);
- Disease Prevention
- Injury Prevention;
- Occupational Health and Safety;
- Risk Analysis;
- Soils;
- Solid and Hazardous Material and Waste Management; and
- Water and Wastewater Treatment.

Knowledge is reported less necessary and cited by less than 30% of survey respondents in the following EH Specialty areas (Chart 5):

- Environmental Health Planning;
- Food Protection;
- GIS;
- Global Environmental Health;
- Hydrogeology;
- Institutional Health;
- Recreational Environmental Health;
- Radiation Health; and
- Vector Control.

Chart 5.


Job Requires Knowledge of the following EH Specialty Areas - Employee Assessment
Water and Waste Water
Vector Control
Solid and Hazardous Material and Waste...
Soils
Risk Analysis
Recreational Environmental Health
Radiation Health
Occupational Health and Safety
Institutional Health
Injury Prevention
Hydrogeology
Global Environmental Health
Geographical Information Systems (GIS)
Food Protection
Environmental Health Planning
Disease Prevention
Disease Prevention (e.g. vectorborne, zoonotic)
Built Environment
All-hazard Preparedness
Air Quality Control
0.00%
20.00%
40.00%
60.00%
80.00%
100.00%
120.00%
No
Yes

C. Specialty Area Program Preparation

Employee respondents were asked to answer yes or no if they were well-prepared in the following EH specialty areas by their undergraduate programs. Chart 6 presents responses in which 50% of employees report being well prepared for more than half of the EH specialty areas provided in the survey. Specialty areas scoring the highest in employee preparedness include:

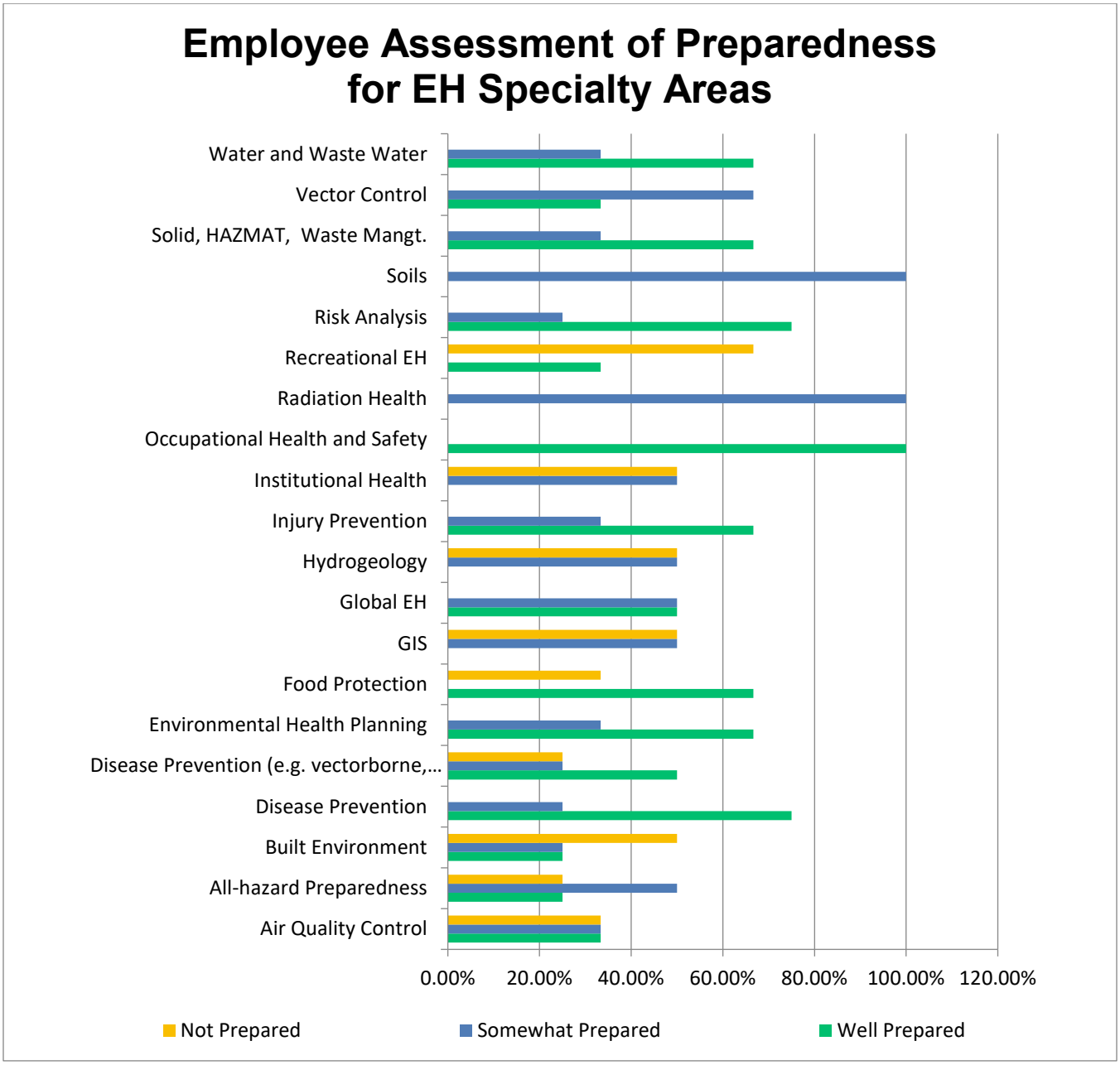
- Disease Prevention (e.g. vectorborne, zoonotic, etc.);
- Disease Prevention;
- Environmental Health Planning;
- Food Protection
- Global Environmental Health
- Injury Prevention
- Occupational Health and Safety
- Risk Analysis
- Solid, HAZMAT and Waste Management;
- Vectorborne/zoonotic Discovery Prevention; and
- Water and Waste Water.

Specialty EH areas showing the highest percent of employees that are least prepared include (50% or more respondents reported "Not Prepared"):

- GIS;
- Hydrogeology;
- Institutional Health;
- Built Environment; and
- Recreational Environmental Health.

The above EH specialty areas in which graduates are least prepared coincide with those knowledge areas reportedly *least* required by the employee's job.

Chart 6.



D. Employee Workplace Data

Chart 7 presents job sectors for graduates of the reaccrediting degree program. As previously mentioned, four respondents are currently employed in the Environmental Health field. Fifty percent of the employees are employed by private companies or corporations. One employee works for a consulting firm and one works for the local or federal government.

Chart 8 shows the distribution of those employees who are employed by local, state or the federal government. One employee works for a local or state health department with the remaining three employees working for other government agencies not reported.

Employees report working in Food Protection and Solid and Hazardous Waste Management.

Half of the employees report making $30 to $40,000 per year, as shown in Chart 9, and half of employee salaries range from $50-60,000 (Chart 9).

Chart 7.

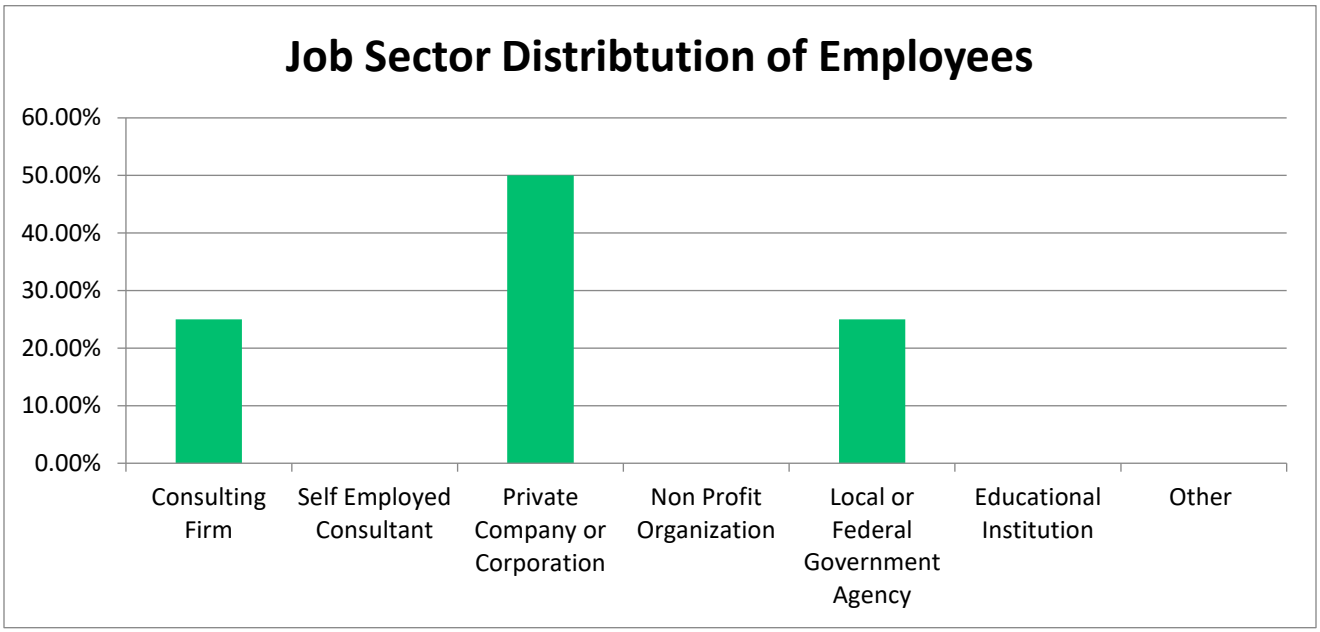


Chart 8.

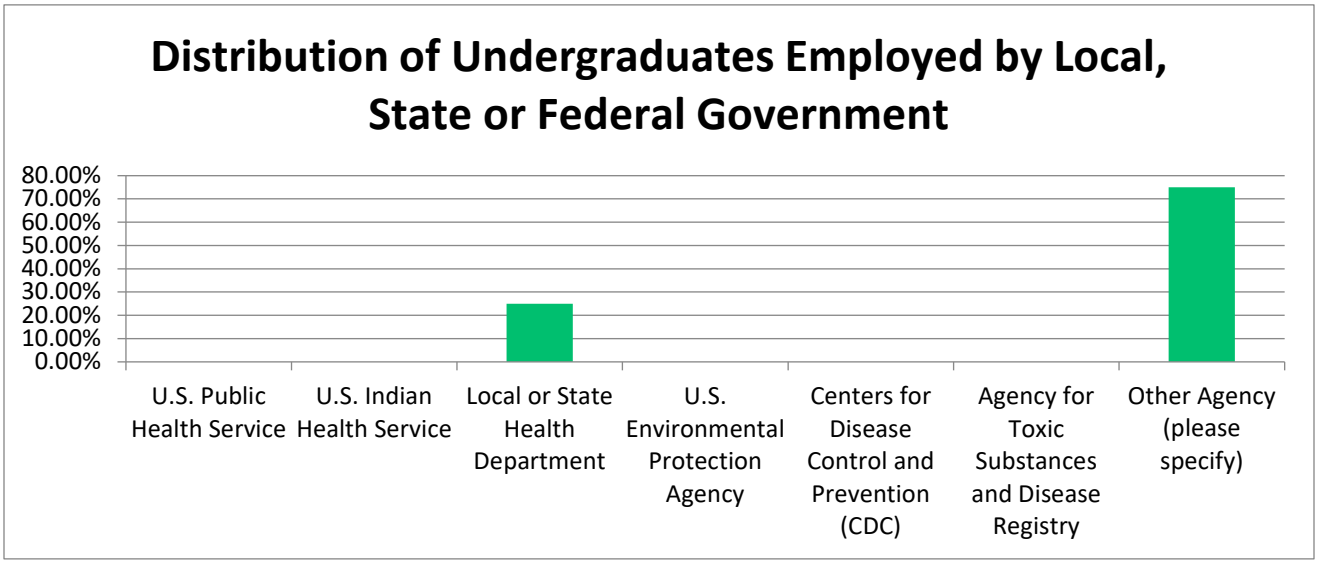
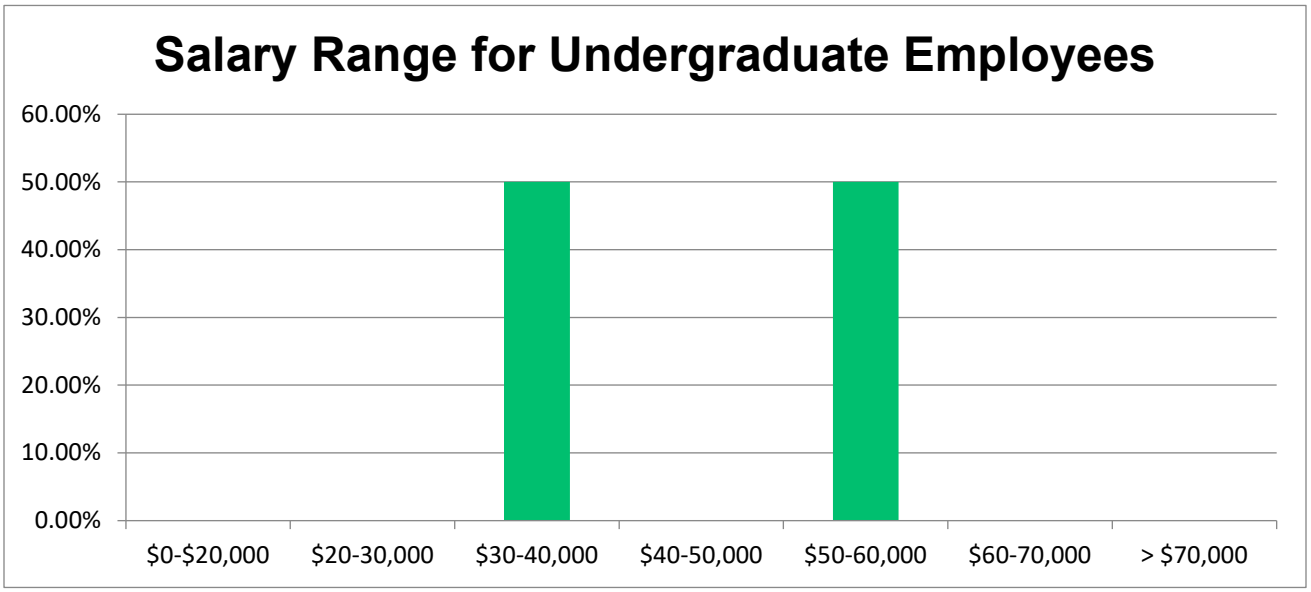


Chart 9



E. Employee Data on Continuing Education and Professional Development

Three employees report having achieved a Master's Degree.

F. Professional Recognition

One employee reports membership in the Los Angeles County Association of Environmental Health Specialists.

G. Credentials Achieved

Credential achieved by employees include:

- New York Asbestos Investigator
- OSHA 40 hours
- Hons Hopkins COVID-19 Contract Tracing
- FEMA Courses – 100, 200, 522 and 700
- ServSafe Food Handler
- CITI Program Responsible Conduct of Research
- CITI Program Biomedical Investigators and Key Personnel

V. Supervisor Survey Results

No Supervisors surveys were completed.