

# NRDC Zero Waste Directive

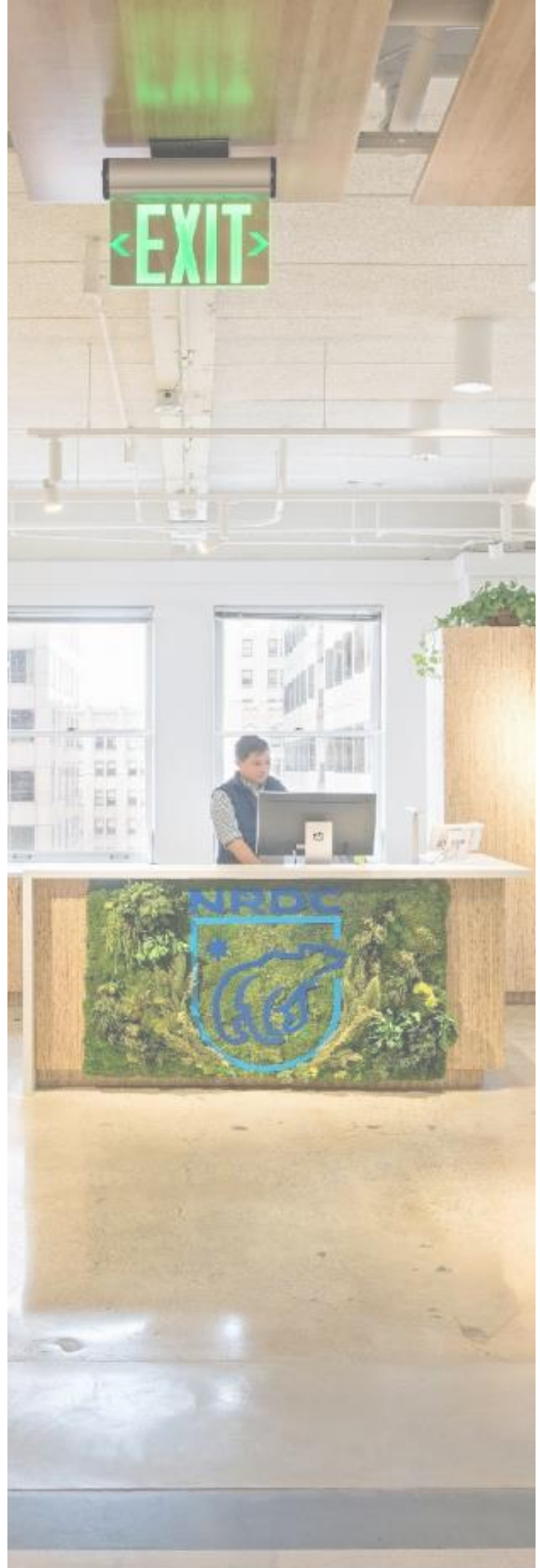
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## EXECUTIVE SUMMARY

Natural Resources Defense Council's Zero Waste Directive (ZWD) was created to minimize material waste generated at NRDC facilities and eliminate waste sent to landfills and incineration, as part of Vision 3 of NRDC's Sustainable Operations Plan. This involves limiting the total amount of waste generated and responsibly managing all unwanted or unusable materials at NRDC offices. A comprehensive plan regarding these zero waste efforts ensures the organization diverts at least 90 percent of solid, liquid (excluding wastewater), organic, and hazardous waste generated from incineration and landfills.

Since NRDC first began tracking diversion rates in fiscal year 2013, there have been incremental improvements. To continue the forward momentum, NRDC has developed new strategies to encourage waste reduction and appropriate discard management. Each strategy outlined in the ZWD is evaluated alongside ongoing data collection and feedback. Implementation of all the strategies is projected over a five year period (FY19 -FY24).

The ZWD increases resource efficiency and product lifespan while contributing to NRDC's mission to safeguard the Earth. Success is contingent upon staff support and involvement.

## CONTEXT AND SCOPE

### BACKGROUND

In fiscal year (FY) July - June 2013, NRDC recorded a 75 percent organizational diversion rate. Since FY2013 there have been incremental improvements to the per capita waste generation and diversion rate (Table 1). Even with this positive trend, it is clear obstacles to zero waste remain.

**The ZWD is designed to address these obstacles through strategic solutions.** The solutions, which are reflected in the ZWD strategies, incorporate: improved communication, performance measurements, prospective outlook, consistent leadership, evaluation of costs and benefits, joint research and development, training and feedback to reduce staff resistance, and sharing of the ZWD achievements.

**Table 1.** NRDC Waste History (FY2013 - FY2018)

Fiscal Year (July - June)	Total Waste & Recycling (lbs)	Landfill Total (lbs)	Diversion Rate (%)
2013	8,623	2,178	75%
2014	44,100	12,305	72%

2015	48,346	14,388	70%
2016	44,004	12,178	72%
2017	53,280	12,601	76%
2018	57,358	10,762	81%

### ZERO WASTE DEFINITION

Quantitatively, NRDC defines zero waste as diverting a minimum of 90 percent of the organization’s waste from incineration and landfills. Qualitatively, NRDC employs Zero Waste International Alliance’s definition<sup>1</sup>:

Zero waste is the conservation of all resources by means of responsible production, consumption, reuse, and recovery of products, packaging, and materials without burning, and with no discharges to land, water, or air that threaten the environment or human health.

### DIVERSION RATE

Diversion rate is calculated by weight (pounds), and the equation is as follows:

$$\text{Diversion Rate} = \frac{\text{Materials diverted from the landfill and incineration (WTE)}}{\text{Total Waste Generated}}$$

The diversion rate also takes into consideration contamination rate. Contamination is waste placed into the incorrect receptible (like placing a banana peel into the recycling bin). We assume in our calculations that all contaminated waste is always diverted towards landfill, our emissions impact may be understated though if contaminated recycling streams are landfilled in bulk rather than sorted through.

### WASTE

The ZWD encompasses all solid, liquid (apart from wastewater), organic, and hazardous waste generated at NRDC offices. This includes:

- Materials generated during daily operations and those generated during irregular activities (e.g., construction and demolition, special events, etc.).
- Liquid wastes if they are accepted in the landfill by the local jurisdiction, or state.
- Hazardous materials are defined by local jurisdiction, state, or country.

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<sup>1</sup> Zero Waste International Alliance, “ZW Definition”, <http://zwia.org/standards/zw-definition/>

## FACILITIES

NRDC's United States offices are located in Bozeman, MT; Chicago, IL; New York, NY; San Francisco, CA; Santa Monica, CA; and Washington, D.C. In all locations a local [point of contact](#) (POC) is assigned to each strategy listed in the ZWD. All the POCs are members of the Facilities Team.

Through superior stewardship and sustainable operations, the NRDC Facilities Team works to foster a collaborative and inclusive workplace, to ensure the health and resilience of NRDC's offices and people, and to safeguard and restore the earth.

## SUCCESS MEASUREMENT

For NRDC to achieve success, with respect to the ZWD, it must:

- Reach an organizational zero waste (90%+ diversion rate) average over an entire fiscal year.
- Annually reduce the total amount of waste generated per capita.
- Ensure diverted materials are reduced, reused, recycled, composted and/or donated for productive use in nature or the economy.
- Avoid exceeding five percent contamination (when incorrect items are placed into the wrong waste stream or when an item is not cleaned properly before diversion).
- Meet all federal, state/provincial, and local solid waste and recycling laws and regulations.
- Comply with all air, water, and land discharge permits required for collection, handling, or processing of materials.
- Strengthen internal and external engagement to promote zero waste.

## STRATEGY 1: MONITOR CHANGE

Having a baseline is crucial to tracking progress of the ZWD strategies. A baseline is derived through recording and assessing existing waste streams, waste stations, and availability of staff/visitor education.

### WASTE LOG

Routine weighing of all waste streams (municipal recycling, compost, electronic waste [e-waste], TerraCycle, and landfill) takes place to understand trends and be alerted to possible issues.

#### FACILITIES TEAM

**Frequency:** Daily, and on an as-needed basis

**Time Commitment:** 30 minutes

1. Record the weights of daily waste collection (recycling, compost, and landfill) and periodic waste collection (e.g., TerraCycle)
2. Transfer recorded weights to the [NRDC Master Waste Spreadsheet](#) the first Monday of each month (this means that on April 1 the spreadsheet is updated with all March data)

#### SUSTAINABILITY TEAM

**Frequency:** Monthly

**Time Commitment:** 15 minutes

1. Review the [NRDC Master Waste Spreadsheet](#) the first week of each month. If data is missing, follow up with the POC

### PHOTOS

Photos are used to verify consistency and look for improvement opportunities across all offices.

#### FACILITIES TEAM

**Frequency:** Annually

**Time Commitment:** 1 hour

1. Photograph all waste stations in NRDC-owned spaces, including but not limited to bathrooms, kitchens, conference rooms, workspaces, and waste discard signs, and label them by Office, Floor, Location (e.g., SM 1st Fl Women's Restroom)
2. Photograph any waste collection sites for plastic bags, e-waste, reusable items, or other unique items
3. File photos in [ZWD Waste Existing Conditions](#) document.
4. Email [sustainability@nrdc.org](mailto:sustainability@nrdc.org) once the photos have been completed

#### SUSTAINABILITY TEAM

**Frequency:** Annually

**Time Commitment:** 1 hour

1. Record observations in [ZWD Office Similarities spreadsheet](#)

## WASTE SERVICE

Vetting all discard management companies ensures they comply with the NRDC's standards. Additionally, the frequency of service provided to each facility is recorded to analyze it against other organizational waste trends.

### FACILITIES TEAM

**Frequency:** Annually

**Time Commitment:** 30 minutes

1. Update all known details in the [Waste Service Summary](#).
2. Email [sustainability@nrdc.org](mailto:sustainability@nrdc.org) once updates are completed

### SUSTAINABILITY TEAM

**Frequency:** Semiannually

**Time Commitment:** 15 minutes

1. Develop Waste Management Company Best Practices that NRDC waste management companies must meet
2. Review the [Waste Service Summary](#) for accuracy and consistency with NRDC waste management best practices
3. Ensure non-disposal options for general recycling, compost, e-waste and other hard-to-recycle items are offered in each office

## WASTE AUDIT

Conducting waste audits with staff is a way to improve engagement while also measuring the quantity, volume, and composition of waste generated. This physical analysis of waste composition is used to identify potential opportunities and shortcomings.

### FACILITIES TEAM

**Frequency:** Every two years

**Time Commitment:** 3–5 hours

1. Conduct the waste audit a day before the office's normal trash pickup (e.g., conduct the audit on Tuesday if trash pickup is on Wednesday). When choosing a day, reference the [Waste Service Summary](#).
2. Follow instructions written in the second tab of the Waste Audit Spreadsheet. For missing equipment, email [sustainability@nrdc.org](mailto:sustainability@nrdc.org) with the waste audit date and itemized list of requested equipment.
3. Record data in the corresponding Waste Audit Spreadsheet: [Bozeman](#); [Chicago](#); [New York](#); [Santa Monica](#); [San Francisco](#); and [Washington, D.C.](#)
4. Email [sustainability@nrdc.org](mailto:sustainability@nrdc.org) once waste audit is completed

### SUSTAINABILITY TEAM

**Frequency:** Every two years

**Time Commitment:** 30 minutes

1. Ensure offices have the necessary supplies outlined in the Waste Audit Spreadsheet
2. Review and analyze spreadsheet once notified of office completion

## STRATEGY 2: OFFICE DESIGN & FLOW

It is crucial to design offices in accordance with the path of least resistance to minimize waste and encourage sustainable practices. This includes understanding and reacting to both occupant behavior and the flow of goods delivered to all NRDC offices to what is discarded (i.e. a Waste Flow Plan).

A Waste Flow Plan (WFP) covers quantities, routes, equipment and staff procedures, storage space design and collection setup. The WFP also considers time restrictions, minimizes travel distance for staff and transfer points, and provides vertical transfer options (e.g. elevators, ramp, or chutes).

*Note: The “path of least resistance”, in this context, is defined as the tendency for people to choose the route with the least amount of effort to accomplish a task.*

### SUSTAINABILITY TEAM

**Frequency:** Variable

**Time Commitment:** 8 hours

- Apply waste-reduction design strategies to existing operations and new construction projects including but not limited to: removing personal landfill bins at desks, placing recycling and compost bins in convenient locations, setting printing defaults to double-sided, and providing electronic note-taking software and filtered water tap
- Develop and follow Design & Construction Protocols
- Develop and follow unique Waste Flow Plan for each office focusing on quality control at each transfer point

## STRATEGY 3: WASTE STATIONS

It is important to have waste station consistency across all offices that are right-sized (i.e. all recycling, compost, and landfill bins are sized appropriately to accommodate the quantity and type of waste generated in each office), and clearly labeled. These waste stations, when space allows, contain all discard streams (recycling, compost, landfill, and alternative recycling) and educates the users on NRDC’s waste goals.

### SIGNAGE

#### FACILITIES TEAM

**Frequency:** Annually

**Time Commitment:** 30 minutes

1. Install signage as instructed in an email received from the Sustainability Team.

#### SUSTAINABILITY TEAM

**Frequency:** Annually

**Time Commitment:** 1 hour

1. Review each office’s waste signage for updates to local recycling, composting, and landfill regulations



2. Provide clear images, have relevant items highlighted, and ensure color coding is consistent with the international standard
3. Email updated waste signage to Facilities Managers with detailed instructions (such as printing, lamination)

### OPEN ANALYTICS

Waste data is accessible to office occupants and presented in an easily digestible format. The previous month's diversion rate is posted above all waste stations and, if feasible, included in an electronic dashboard that is visually accessible by staff and visitors.

### FACILITIES TEAM

**Frequency:** Monthly (after one-time setup)

**Time Commitment:** 15 minutes

**One-time Setup:**

1. Email [sustainability@nrdc.org](mailto:sustainability@nrdc.org) the quantity of all-inclusive waste stations (figure 1) in the office
  - The POC receives by mail:
    - Combination board(s) (half cork, half whiteboard) + dry erase marker(s)
    - (In SF, SM, and NY) a plastic bag bundling container
  - The POC receives by email:
    - Email templates for Facilities Managers to announce the changes to their office (Appendix A)
    - Instructions (Appendix B) from the Sustainability Team on what to do with the following:
      - 14" x 11" infographic
      - Individual signs for each waste stream (compost, plastic bags, municipal recycling, landfill, and TerraCycle)
      - Reminder for occupants to pour out any liquids in bottles, cans, and cups before disposing
2. Update waste station whiteboard(s) with previous month's diversion rate, and any announcements or reminders

**Monthly:**

1. At the beginning of each month, the POC updates the whiteboard above each waste station to show the last month's diversion rate

**Figure 1.** Example of an all-inclusive waste station. It includes: municipal recycling, compost, landfill, TerraCycle, and (when appropriate) plastic bag bundling



**SUSTAINABILITY TEAM**

**Frequency:** One-time

**Time Commitment:** 30 minutes

1. Place orders for the quantity of combination boards and plastic bag bundling containers received from each office
2. Email instructions to POC (Appendix C)

## STRATEGY 4: EDUCATION

NRDC educates staff, visitors, and vendors on organizational waste practices, diversion rate, and other waste reduction strategies. Education is key in sustained practice and positive ripple effect.

### STAFF MEETING ANNOUNCEMENTS

**FACILITIES TEAM**

**Frequency:** Monthly

**Time Commitment:** Varies; roughly 15 minutes

1. Allocate time, when requested, for Sustainability Announcement in monthly Staff Meetings

**SUSTAINABILITY TEAM**

**Frequency:** Monthly

**Time Commitment:** 30 minutes

1. Email POC sustainability announcements and reminders the week prior to upcoming staff meetings

### ALIGNMENT

All employees (including new hires) comprise NRDC's sustainability culture. Therefore, everyone is provided with the resources needed to contribute toward zero waste efforts. This includes a general overview of sustainability at NRDC offices, recommendations on how to implement in-home zero waste strategies, and an introductory presentation at new hire orientations.

Additionally, before external companies are hired to perform various services (cleaning, maintenance, and supply purchasing) their practices are reviewed and, if needed, they are trained to better align with the ZWD.

#### FACILITIES TEAM

**Frequency:** For each new hire

**Time Commitment:** 15 minutes

- Provide NRDC sustainability material to new employees and include waste discard education during office tour
- Send any potential cleaning, maintenance, and supply purchasing vendors to [sustainability@nrdc.org](mailto:sustainability@nrdc.org) for review and approval

#### SUSTAINABILITY TEAM

**Frequency:** Annually

**Time Commitment:** 16 hours

- Ensure Human Resources, during the new staff orientation, includes the Sustainability One-Pager and allocates time for a sustainability presentation given by a Facilities Team member
- Revise onboarding material to reflect daily operations
- Provide local sustainability recommendations that can be distributed to staff and visitors (such as waste prevention strategies, compost facilities, TerraCycle, and donation centers)
- Provide checklist that each office can use to ensure Facilities Team cover all sustainability topics during orientation of office
- Screen all potential cleaning, maintenance, and supply purchasing vendors to ensure their practices align with the ZWD

### STAFF ENGAGEMENT

Encouraging and incentivizing NRDC staff participation is done to gain volunteers in each office. The volunteers act as a liaison between the Sustainability Team and the broader organization. They promote both waste and energy reduction initiatives and serve as role models and sources of information for their fellow employees regarding environmentally responsible behavior. All volunteers complete a training session to provide them with knowledge and leadership tactics.

#### SUSTAINABILITY TEAM

**Frequency:** Variable

**Time Commitment:** Active for 6 months over one year, in 3-month increments

1. Develop Staff Engagement Plan (such as solicitation, incentives, training, and activities) for staff volunteers that aligns with the NRDC’s Sustainable Operations Plan and ZWD

### VISITOR ENGAGEMENT

Visitors to NRDC offices are informed of the organization’s zero waste goal and have the resources needed to comply with NRDC’s zero waste standards. Upon request, NRDC provides recommendations on how to implement in-home zero waste strategies.

#### FACILITIES TEAM

**Frequency:** Variable

**Time Commitment:** 10 minutes

1. Educate visitors on the organization’s zero waste goal upon first-time arrival (and on-going as necessary)
2. Distribute resources needed for NRDC visitors to comply with the organization’s zero waste standards and, potentially, implementing in-home zero waste strategies

#### SUSTAINABILITY TEAM

**Frequency:** Variable

**Time Commitment:** 8 hours

1. Provide local sustainability recommendations for staff and visitors (how to reduce consumption, compost facilities, TerraCycle, donation centers, etc.)

## STRATEGY 5: PROCUREMENT

Responsible procurement at all levels is the first line of defense in reducing total waste generated and eliminating waste sent to landfills or incineration.

### PROCUREMENT POLICY

When purchasing products, NRDC assesses: **production** (requirements to make a product), **use** (how use of the product impacts humans and the environment), and **post-use** (how disposition of the product impacts the environment)<sup>2</sup>. NRDC supports nearby manufacturers that produce long-life and low-embodied carbon products free of harmful chemicals. Manufacturers are requested to use minimal shipping material and packaging, if any, that is recyclable or reusable, and to share opportunities for product repair and end-of-life options (recycling, take-back program, reuse, etc.).

#### SUSTAINABILITY TEAM

**Frequency:** One-time

**Time Commitment:** 45 hours

1. Develop and follow Procurement Policy that aligns with the NRDC mission

### CATERING POLICY

The [Catering Policy](#) aligns NRDC catering purchases with the organization's external work. NRDC strives to procure only ethically produced and sustainably sourced food and beverages. Ordering

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<sup>2</sup> David Evans, “Cups: Single Use (Disposable) vs. Reusable - An Honest Comparison”, <https://terngoods.com/blogs/learn/cups-single-use-disposable-vs-reusable-an-honest-comparison>

and handling the purchases is also done in a way to avoid excess food leftovers and packaging discards.

**SUSTAINABILITY TEAM**

**Frequency:** One-time

**Time Commitment:** 30 hours

1. Develop [Catering Policy](#) for both staff and vendors that align with NRDC’s mission
2. Develop consistent labeling and storage for leftover food and beverages that aligns with the Catering Policy
3. Create [NRDC Catering Database](#) to list restaurants that potentially align with the Policy
4. Ensure guidelines are integrated in vendor contracts for NRDC coordinated and/or hosted events with the help of Corporate Counsel
5. Promote Catering Policy use to all staff and make periodic updates

**TOWEL SERVICE**

A towel service is provided in each office to minimize paper towel use in the kitchen. If towel service is not feasible in select offices or if the environmental benefit is unclear (e.g., creating excessive laundry loads in a drought affected region), 100 percent recycled content paper towels are used.

**FACILITIES TEAM**

**Frequency:** Weekly

**Time Commitment:** 15 minutes

1. Determine appropriate areas to store clean towels that are ready for use and dirty towels that need to be cleaned
2. Educate pertinent team members (such as janitorial staff) on new procedure
3. Send out email to staff notifying them of new towel service (Appendix D)

**SUSTAINABILITY TEAM**

**Frequency:** Annually

**Time Commitment:** 8 hours

1. Purchase reusable organic bamboo/cotton hand towels
2. Find environmentally friendly laundry service for each office
3. If analysis of cost and natural resources needed to implement is too high, ensure all paper towels being purchased are made from 100 percent recycled content.

**REUSABLE WARE**

Reusable service ware is prioritized and all attempts are made to avoid single-use service ware. Additionally, all products are reviewed before purchase understand what resources it takes to make the product, how the use of the product impacts humans and the environment, and how discard of the product impacts the environment. Based on the results, the least impactful ware (cups, straws, and trays) is chosen for each NRDC office.

**FACILITIES TEAM**

**Frequency:** One-time

**Time Commitment:** 30 minutes

1. Identify areas of office around main entrance and exit that may serve as usable space to store reusable ware. Send photographed areas to [sustainability@nrdc.org](mailto:sustainability@nrdc.org), including a description of traffic flow around the area (e.g. “most staff enter through the main entrance and it can become congested”)

**SUSTAINABILITY TEAM**

**Frequency:** One-Time

**Time Commitment:** 16 hours

1. Review results of Beverage Survey (Appendix E) to understand quantity and type of ordering that must occur (cups for chilled and/or hot drinks, straws, basket size, etc.)
2. Research products (Appendix F)
3. Review email sent from POC on their office conditions
4. Email POC for approval before placing order
5. Email POC directions (Appendix F) once products arrive

## STRATEGY 6: CONSTRUCTION WASTE

NRDC significantly minimizes all waste generated from construction by applying a Construction Waste Management Plan as outlined in the NRDC Design & Construction Protocols. The Protocols document features requirements to minimize and properly divert construction waste, aligning with NRDC’s zero waste vision.

**SUSTAINABILITY TEAM**

**Frequency:** One-Time

**Time Commitment:** 45 hours

1. Develop and follow NRDC Design & Construction Protocols

## STRATEGY 7: CARBON OFFSETS

To help offset the emissions associated with NRDC’s waste discard, carbon offsets are purchased annually. These purchases align with the [NRDC Offset Policy](#).

**SUSTAINABILITY TEAM**

**Frequency:** Annually in July

**Time Commitment:** 8 hours

1. Verify the waste log is accurate and calculate emissions for the previous fiscal year.
2. Review carbon offset options and make purchases accordingly

## IMPLEMENTATION

Implementation of all the strategies outlined in the ZWD is projected over a five-year period (FY19 - FY24). During this time NRDC continues to evaluate the efficacy of each strategy. The team modifies the Plan as necessary to meet the zero waste goals and objectives, and adjust to changing social, environmental, and economic conditions. Implementation largely includes collaboration

between the Sustainability Team, Facilities Team, and building management/owner. Progression of the plan and designated POCs can be tracked on the [ZWD Status Spreadsheet](#).

## DOCUMENTS REFERENCED IN ZWD

ZWD	Document Name	Document Location	Direct Link
4.a.	NRDC Master Waste Spreadsheet	Dropbox (NRDC)\Facilities Team Folder\Facilities Team\Sustainability\Waste Management	<a href="#">NRDC Master Waste Spreadsheet</a>
4.b.	ZWD Office Similarities Spreadsheet	Google Docs	<a href="#">ZWD Office Similarities spreadsheet</a>
4.b.	Waste Existing Conditions	Dropbox (NRDC)\Facilities Team Folder\Facilities Team\Sustainability\Waste Management	<a href="#">ZWD Waste Existing Conditions</a>
4.c.	ZWD Offices Waste Service Summary	Dropbox (NRDC)\Facilities Team Folder\Facilities Team\Sustainability\Waste Management\Waste Management Plan\Office Waste Plans	<a href="#">ZWD Offices Waste Service Summary</a>
7.b.	NRDC Catering Policy	Dropbox (NRDC)\Facilities Team Folder\Facilities Team\Sustainability\External Consulting\Materials Procurement\Office Procurement\Catering Policy Archive	<a href="#">NRDC Catering Policy</a>
7.b.	NRDC Catering Database	Google Docs	<a href="#">NRDC Catering Database</a>
10	NRDC Offset Policy	Dropbox (NRDC)\Facilities Team Folder\Facilities Team\Sustainability\Offsets	<a href="#">NRDC Offset Policy</a>
11	ZWD Status Spreadsheet	Google Docs	<a href="#">ZWD Status Spreadsheet</a>

## APPENDICES

View all Appendices in “[Supplemental Docs - NRDC Zero Waste Plan](#)”