

Entry: 519

## AlexRenew's Children's Educational Program – Cloe the Tunnel Boring Machine and Friends

Started at: 10/19/2021 03:23 PM - Finalized at: 10/22/2021 03:34 PM

<b>Page: NEAA Nomination Form</b>
APPLICATION DEADLINE: <b>Friday, October 22, 2021, 11:59 pm PST</b>
<b>All fields indicated by a red asterisk (*) must be completed</b>
<b>Category</b> Public Information & Education: Educational Program
NOMINATING AGENCY'S INFORMATION
<b>Name &amp; Title of Individual Submitting this Application</b> Caitlin Feehan, RiverRenew Program Director
<b>Submitting Agency's Name</b> AlexRenew
<b>State (2letters)</b> VA
<b>Service Area Population of Submitting Agency</b> 300,000
<b>Social Media (Indicate all that applies)</b> Communications Person's Name & Email, Facebook, Instagram, Twitter
<b>Communications Contact</b> Caitlin Feehan
<b>Communications Contact's Email</b> caitlin.feehan@alexrenew.com
<b>Facebook</b> <a href="https://www.facebook.com/alexandriarenew">https://www.facebook.com/alexandriarenew</a> ( <a href="https://www.facebook.com/alexandriarenew">https://www.facebook.com/alexandriarenew</a> )
<b>Instagram</b> <a href="https://www.instagram.com/callmemoxie/?hl=en">https://www.instagram.com/callmemoxie/?hl=en</a> ( <a href="https://www.instagram.com/callmemoxie/?hl=en">https://www.instagram.com/callmemoxie/?hl=en</a> )

**Twitter**

<https://twitter.com/AlexandriaRenew> (<https://twitter.com/AlexandriaRenew>)

**Agency Logo - Hi-Res Picture (jpg; or .png)**

Download File (<https://vo-general.s3.amazonaws.com/1791819d-f6fc-46c3-b1b7-a1d38a2bd4d4/c1386048-d4e7-48af-b21a-f053a4329c92?AWSAccessKeyId=AKIAJ4PRWO26HAX3IOCA&Expires=1723306012&response-content-disposition=inline%3B%20filename%3D%22ALEXRENEW%20LOGO%20090114.jpg%22&response-content-type=image%2Fjpeg&Signature=lgd2bURctNRPCLoEh9A5%2BNJ79%2Fw%3D>)

**PROJECT / INDIVIDUAL NOMINEE'S INFORMATION****Name of Nominated Project / Program or Nominee (as it will appear on the NEAA award)**

AlexRenew's Children's Educational Program – Cloe the Tunnel Boring Machine and Friends

**Has this project / program ever been submitted for NEAA recognition in the past?**

No

**SUPPORTING DOCUMENTATION****Narrative Description: Project / Program or Individual (attach pdf, limited to 4 pages, double-spaced, 12pt)**

Download File ([https://vo-general.s3.amazonaws.com/1791819d-f6fc-46c3-b1b7-a1d38a2bd4d4/a561f943-d3bc-49e5-8aea-ff7d27bca870?AWSAccessKeyId=AKIAJ4PRWO26HAX3IOCA&Expires=1723306012&response-content-disposition=inline%3B%20filename%3D%222021-1022-NACWA\\_Cloe%20and%20Friends%20Program%20Narrative.pdf%22&response-content-type=application%2Fpdf&Signature=fQ7H11JT6xzDW3ftpuAQoFvIrpY%3D](https://vo-general.s3.amazonaws.com/1791819d-f6fc-46c3-b1b7-a1d38a2bd4d4/a561f943-d3bc-49e5-8aea-ff7d27bca870?AWSAccessKeyId=AKIAJ4PRWO26HAX3IOCA&Expires=1723306012&response-content-disposition=inline%3B%20filename%3D%222021-1022-NACWA_Cloe%20and%20Friends%20Program%20Narrative.pdf%22&response-content-type=application%2Fpdf&Signature=fQ7H11JT6xzDW3ftpuAQoFvIrpY%3D))

**Supplemental Information Included - i.e. images, video, add'l document (Optional)**

Yes

**Supporting Material (PDF, limited to 4 pages)**

Download File ([https://vo-general.s3.amazonaws.com/1791819d-f6fc-46c3-b1b7-a1d38a2bd4d4/50dc8917-ac46-4f17-be01-9670230eaaaa?AWSAccessKeyId=AKIAJ4PRWO26HAX3IOCA&Expires=1723306012&response-content-disposition=inline%3B%20filename%3D%222021-1022-NACWA\\_Cloe%20and%20Friends%20Supporting%20Material.pdf%22&response-content-type=application%2Fpdf&Signature=SVxc1D%2BDlgEISBI05MMKokhhH1g%3D](https://vo-general.s3.amazonaws.com/1791819d-f6fc-46c3-b1b7-a1d38a2bd4d4/50dc8917-ac46-4f17-be01-9670230eaaaa?AWSAccessKeyId=AKIAJ4PRWO26HAX3IOCA&Expires=1723306012&response-content-disposition=inline%3B%20filename%3D%222021-1022-NACWA_Cloe%20and%20Friends%20Supporting%20Material.pdf%22&response-content-type=application%2Fpdf&Signature=SVxc1D%2BDlgEISBI05MMKokhhH1g%3D))

**Supporting Material - Video (provide link)****MEMBER SPOTLIGHT**

Please attach a third-person article (350-400 words MS doc) - something that a layperson would understand, describing your project / program to be posted on the front page of NACWA's website as part of our "Member Spotlight" section.

**Member Spotlight Document (MS Word)**

Download File ([https://vo-general.s3.amazonaws.com/1791819d-f6fc-46c3-b1b7-a1d38a2bd4d4/d262b2de-2b64-4ff9-a25f-f991bda31290?AWSAccessKeyId=AKIAJ4PRWO26HAX3IOCA&Expires=1723306012&response-content-disposition=inline%3B%20filename%3D%222021-1022-NACWA\\_Cloe%20and%20Friends%20Member%20Spotlight.docx%22&response-content-type=application%2Fvnd.openxmlformats-officedocument.wordprocessingml.document&Signature=tLHiubSUeDLfFthuz3c628XyFv0%3D](https://vo-general.s3.amazonaws.com/1791819d-f6fc-46c3-b1b7-a1d38a2bd4d4/d262b2de-2b64-4ff9-a25f-f991bda31290?AWSAccessKeyId=AKIAJ4PRWO26HAX3IOCA&Expires=1723306012&response-content-disposition=inline%3B%20filename%3D%222021-1022-NACWA_Cloe%20and%20Friends%20Member%20Spotlight.docx%22&response-content-type=application%2Fvnd.openxmlformats-officedocument.wordprocessingml.document&Signature=tLHiubSUeDLfFthuz3c628XyFv0%3D))

**Member Spotlight Hi-Res Picture (jpg; or .png)**

Download File (<https://vo-general.s3.amazonaws.com/1791819d-f6fc-46c3-b1b7-a1d38a2bd4d4/912e7dac-1f72-495d-a28a-d8c3b0c3b328?AWSAccessKeyId=AKIAJ4PRWO26HAX3IOCA&Expires=1723306012&response-content-disposition=inline%3B%20filename%3D%22Cloe%20Storybook%20Cover.jpg%22&response-content-type=image%2Fjpeg&Signature=W2TYzq2vFAFhvy7Cv5JzjD1fTO8%3D>)

**Member Spotlight Hi-Res Picture (.jpg; or .png)**

Download File (<https://vo-general.s3.amazonaws.com/1791819d-f6fc-46c3-b1b7-a1d38a2bd4d4/7efbcc91-125b-446b-a15e-19309290716b?AWSAccessKeyId=AKIAJ4PRWO26HAX3IOCA&Expires=1723306012&response-content-disposition=inline%3B%20filename%3D%22Wanye%20the%20Crane%20Full.jpg%22&response-content-type=image%2Fjpeg&Signature=qw46XxI5KWAtM%2B7XayNfbWsE3dE%3D>)

**PROJECT POSTER or PROJECT WEBSITE**

Please include a hi-res PDF or website link of your Project to be displayed on NACWA's NEAA website (example of last year's [honorees \(https://www.nacwa.org/about-us/awards/national-environmental-achievement-award-program/neaa-2021-honorees\)](https://www.nacwa.org/about-us/awards/national-environmental-achievement-award-program/neaa-2021-honorees))

**Project Poster / Website (indicate at least one)**

Project Website

**Project Website**

<https://www.riverrenew.com/community/cloes-corner> (<https://www.riverrenew.com/community/cloes-corner>)

**APPLICATION AUTHORIZATION**

Please contact [btrombino@nacwa.org](mailto:btrombino@nacwa.org) (<mailto:membership@nacwa.org>; [btrombino@nacwa.org](mailto:btrombino@nacwa.org)?subject=Who%20is%20Our%20NACWA%20Primary%20Contact%20for%20the%20NEAA%20application%3F).

if you do not know the name of your NACWA Representative (SUBJECT: Who is Our NACWA Primary Contact for the NEAA application?)

**Signature of Individual Submitting Application (pdf/jpg)****Name of Submitting Agency's NACWA Representative**

Karen Pallansch

**Title of Submitting Agency's NACWA Representative**

Chief Executive Officer

**Email of Submitting Agency's NACWA Representative**

karen.pallansch@alexrenew.com

**Signature of Submitting Agency's NACWA Representative (pdf/jpg)**

**Does this Project/Program involve another NACWA Agency?**

No

**Please review your application prior to finalizing it. All fields with a red asterisk (\*) must be completed. If you have any questions in regard to submitting your application, please contact Bredy Trombino (<mailto:btrombino@nacwa.org?subject=Application%20Questions%20-%20PreCompletion>) at 202.533.1820.**



## **Program Narrative for AlexRenew's Children's Outreach Program – Cloe the Tunnel Boring Machine and Friends**

Alexandria Renew Enterprises (AlexRenew), the regional public wastewater treatment provider in Alexandria, Virginia recently began construction on its RiverRenew Tunnel Project, a state-mandated project to reduce combined sewer overflows in Alexandria. Since the start of the Project's planning, AlexRenew has conducted significant community outreach to engage and educate Alexandria's residents about the importance of the RiverRenew Tunnel Project. As part of its outreach geared toward younger audiences in Alexandria, AlexRenew's children's education program features cartoons of the various equipment used to construct the Project, with a central character being Cloe the Tunnel Boring Machine. AlexRenew is submitting its children's education program – Cloe the Tunnel Boring Machine and Friends, for consideration in the NEAA category "Public Information & Education: Education Program".

AlexRenew's RiverRenew Tunnel Project is in response to a 2017 Virginia law requiring the City of Alexandria remediate its four combined sewer outfalls by July 1, 2025. AlexRenew assumed ownership of the four combined sewer outfalls and the overall remediation project in 2018. The Project includes the construction of a 2-mile-long, 100-foot-deep tunnel with surface level construction sites in Alexandria's historic Old Town district and residential neighborhoods. At its completion, the RiverRenew Tunnel Project will prevent millions of gallons of combined sewer overflows from polluting three of Alexandria's waterways, including the Potomac River. With a construction cost of \$454.4 million, connecting with and educating the residents of Alexandria about the project's importance and costs has been crucial for the successful completion of this program.

Following the launch of our outreach program in our community at large, in July 2020, AlexRenew introduced Cloe the Tunnel Boring Machine (now trademarked), a cartoon version of the machine that will be used to construct the tunnel (See Supporting Materials for the image used in social media to introduce Cloe). Over the last year, Cloe and her “friends” (other construction equipment) have been created to explain construction through our website, social media posts, and signage at our construction sites. Examples include:

- Edie the Excavator illustrated how a building would be demolished to prepare one of the construction sites. See Supporting Materials for an image of Edie the Excavator used for social media and site signage and a photo of sign posted adjacent to the construction site.
- Elaine the All-Terrain Crane illustrated how we would set up one of the sites for trailers and materials and equipment staging. See Supporting Materials for an image of the Elaine the All-Terrain Crane used for social media and site signage and a photo of the sign posted overlooking the construction staging site.
- Wayne the Crawler Crane illustrated the first step of constructing a deep shaft for the Tunnel Project. See Supporting Materials for the image of Wayne the Crawler Crane used for social media.

To build on these efforts, AlexRenew published the children’s book, *Cloe the Tunnel Boring Machine Builds a Tunnel*, in September 2021. The book tells the story of Cloe, who builds a tunnel in Old Town Alexandria to prevent combined sewage from overflowing into the Potomac River and explains how the tunnel will improve the health of our waterways. The book is available virtually through our Project website (link provided in Supporting Materials)

and hard copies that have been distributed to local public libraries, daycares, and afterschool programs.

The best metric to-date indicating the success of the educational program has been the informal feedback we've received from residents as they've engaged with the various educational elements. As an example, the following is an excerpt from an email from a resident specifically referencing the construction equipment by the character names:

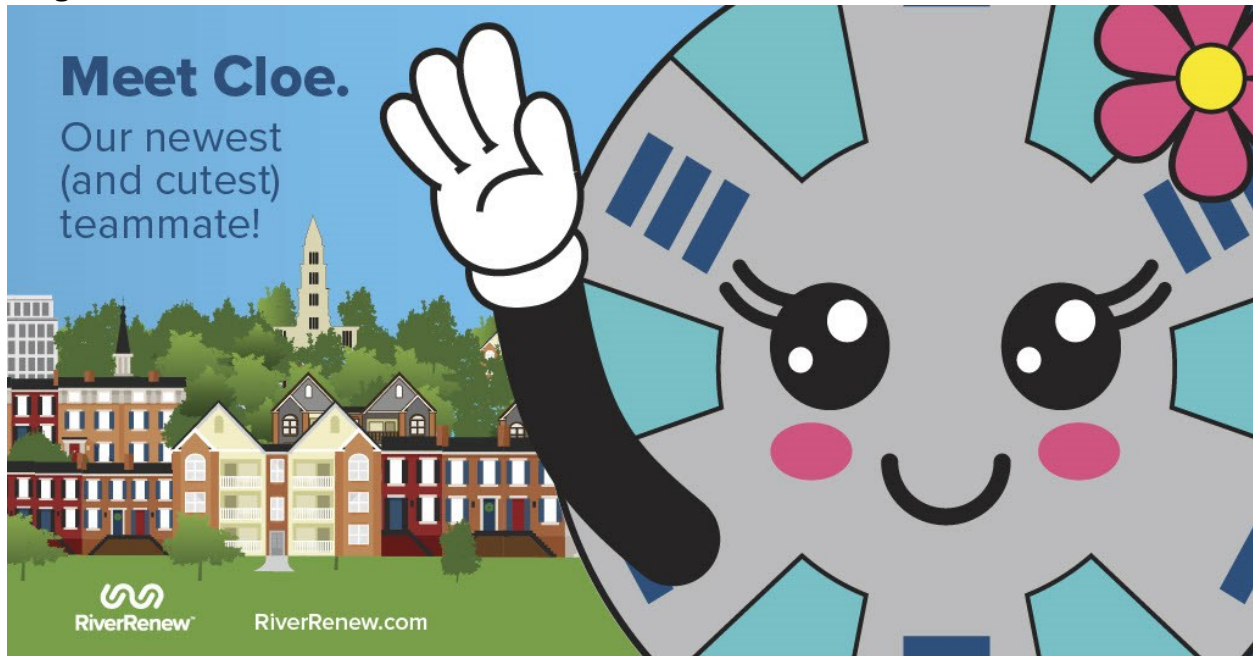
“This morning and from my roof, I enjoyed watching Eddy, the excavator, taking down the walls [of the building being demolished] and Bob Cat removing and sorting the materials to their correct pile.... and there is Wallace, the waterer, soaking the appropriate areas where the demolition is happening. So far, all seems to be going smoothly with little disturbance or loud noise to our neighborhood which is south of Oronoco St. Thanks to you and your team for thoughtfully organizing the demolition.”

Building upon positive feedback from Alexandria's City Council on Wayne the Crawler Crane, our groundbreaking event in September included a crane with flames on its sides, mimicking Wayne (see picture in Supporting Materials).

The education campaign is illustrating the effort that goes into a project like this, in an engaging, interactive, and positive way. This educational program has helped us connect with residents across Alexandria – changing the focus of this mega project from its impacts into what it takes to build and how it improves the health of Alexandria's waterways.

## Supporting Material for AlexRenew's Children's Outreach Program – Cloe the Tunnel Boring Machine and Friends

Image Used for Social Media Post to Introduce Cloe



Edie the Excavator Image Used for Social Media and Site Signage to Illustrate Building Demolition

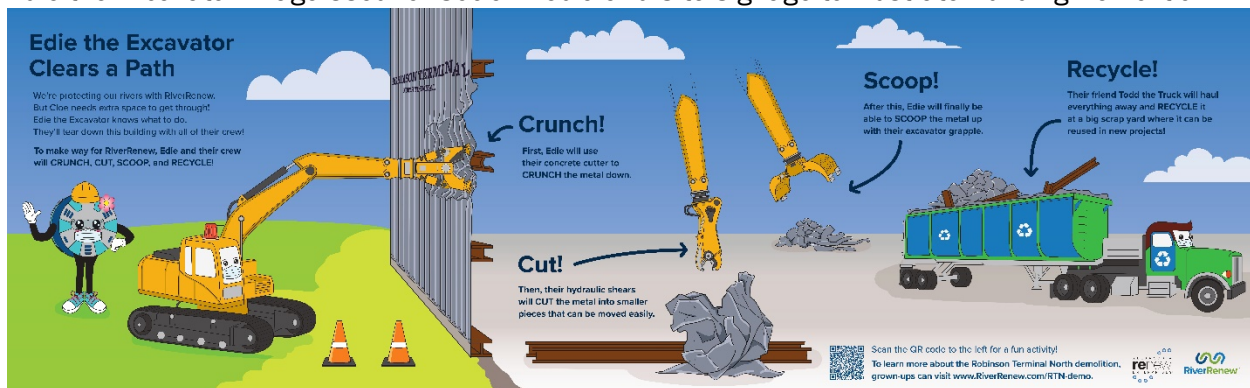
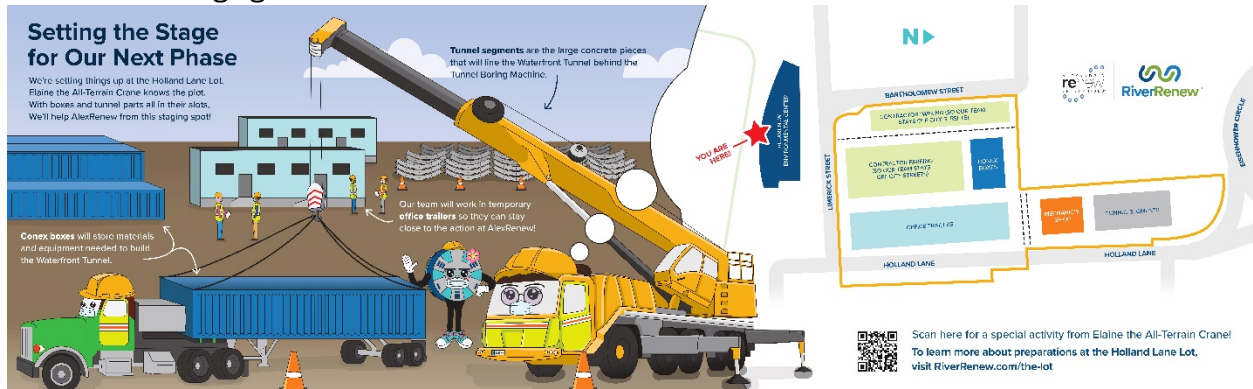


Image of Edie the Excavator Signage Posted at Construction Site



## Elaine the All-Terrain Crane Image Used for Social Media and Site Signage to Illustrate Site Set-up for Construction Staging



## Image of Elaine the All-Terrain Crane Posted on a Fence Overlooking the Construction Staging Site





Image Used for Social Media Post of Wayne the Crawler Crane Showing the First Step of Constructing a Deep Shaft for the Tunnel Project.

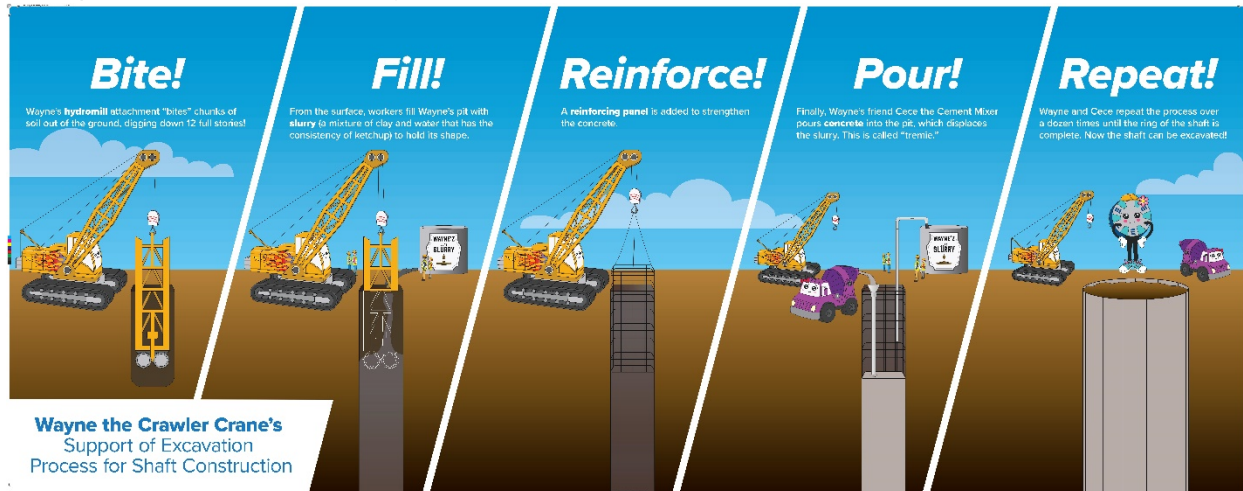


Image of Flames on the Side of a Crawler Crane Featured at Our RiverRenew Tunnel Project Groundbreaking Ceremony



Image of the Cover of Our Children's Book, Cloe the Tunnel Boring Machine Builds a Tunnel. Full Cloe the Tunnel Boring Machine Builds a Tunnel children's book can be found here: [Cloe's Corner](#).



## AlexRenew's Cloe the Tunnel Boring Machine and Friends Education Program to Engage Residents on the Importance of its RiverRenew Tunnel

Alexandria Renew Enterprises (AlexRenew), the regional public wastewater treatment provider in Alexandria, Virginia recently began construction on its RiverRenew Tunnel Project, a state-mandated project to reduce combined sewer overflows in Alexandria. Since the start of the Project's planning, AlexRenew has conducted significant community outreach to engage and educate Alexandria's residents about the importance of the RiverRenew Tunnel Project. As part of its outreach geared toward younger audiences in Alexandria, AlexRenew created an education program featuring cartoons versions of the various equipment used to construct the Project, with a central character being Cloe the Tunnel Boring Machine.

Over the last year, Cloe and her "friends" (other construction equipment) have been created to explain construction through our website, social media posts, and signage at our construction sites. Examples include:

- Edie the Excavator illustrated how a building would be demolished to prepare one of the construction sites.
- Elaine the All-Terrain Crane illustrated how we would set up one of the sites for trailers and materials and equipment staging.
- Wayne the Crawler Crane illustrated the first step of constructing a deep shafts for the Tunnel Project.

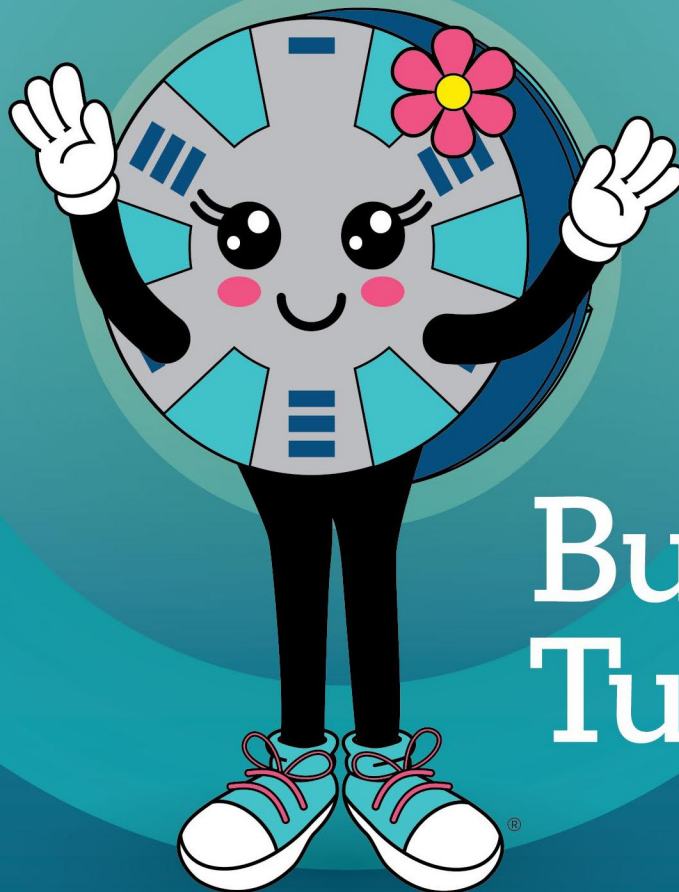
To build on these efforts, AlexRenew published *Cloe the Tunnel Boring Machine Builds a Tunnel* in September 2021. The book tells the story of Cloe who builds a tunnel in Old Town Alexandria to prevent combined sewage from overflowing into the Potomac River and explains how the tunnel will improve the health of our waterways. The book is available virtually through our Project website and hard copies that have been distributed to local public libraries, daycares, and afterschool programs.

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# Cloe

THE TUNNEL BORING MACHINE

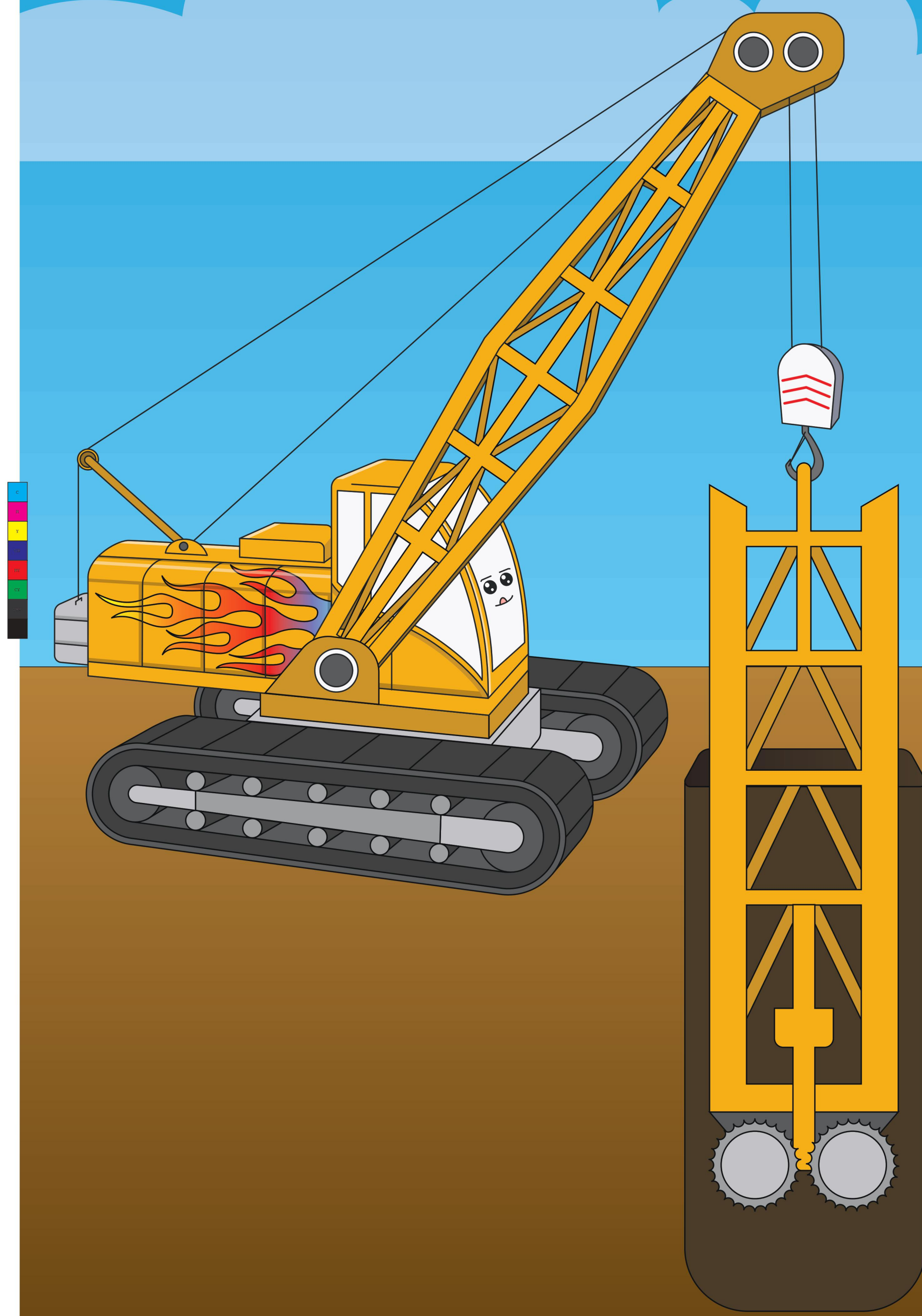


Builds a  
Tunnel!



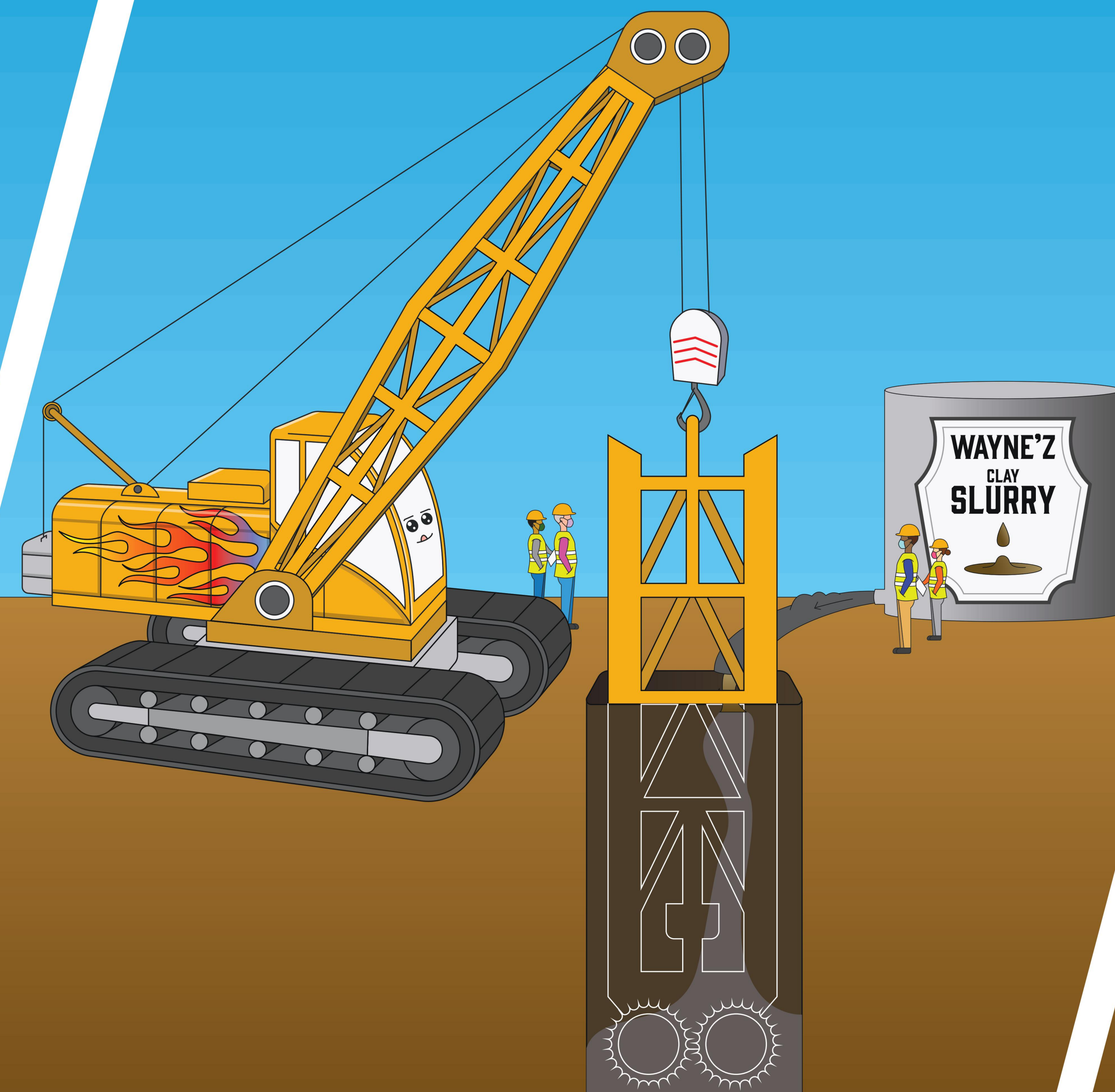
# Bite!

Wayne's **hydromill** attachment "bites" chunks of soil out of the ground, digging down 12 full stories!



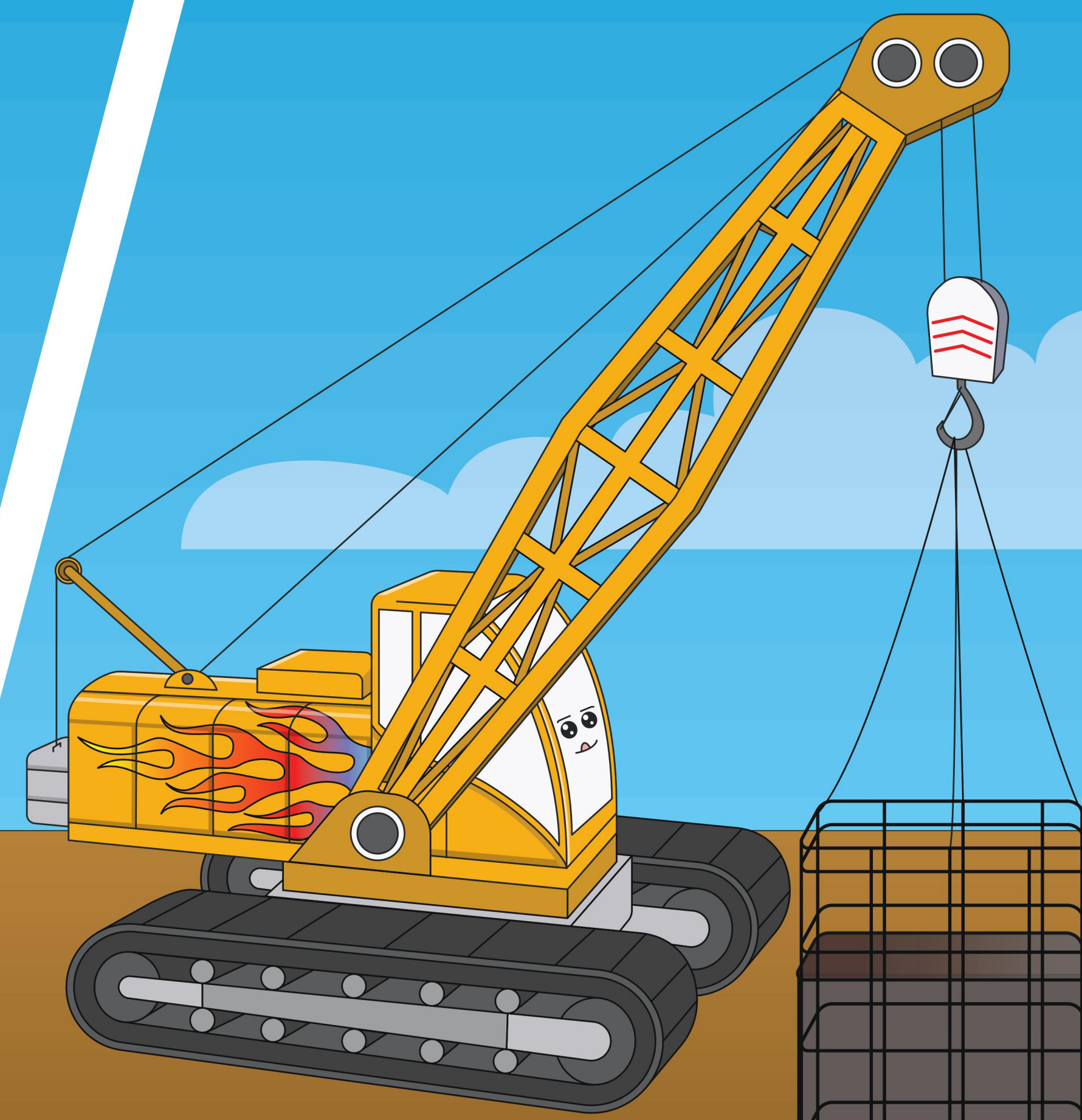
# Fill!

From the surface, workers fill Wayne's pit with **slurry** (a mixture of clay and water that has the consistency of ketchup) to hold its shape.



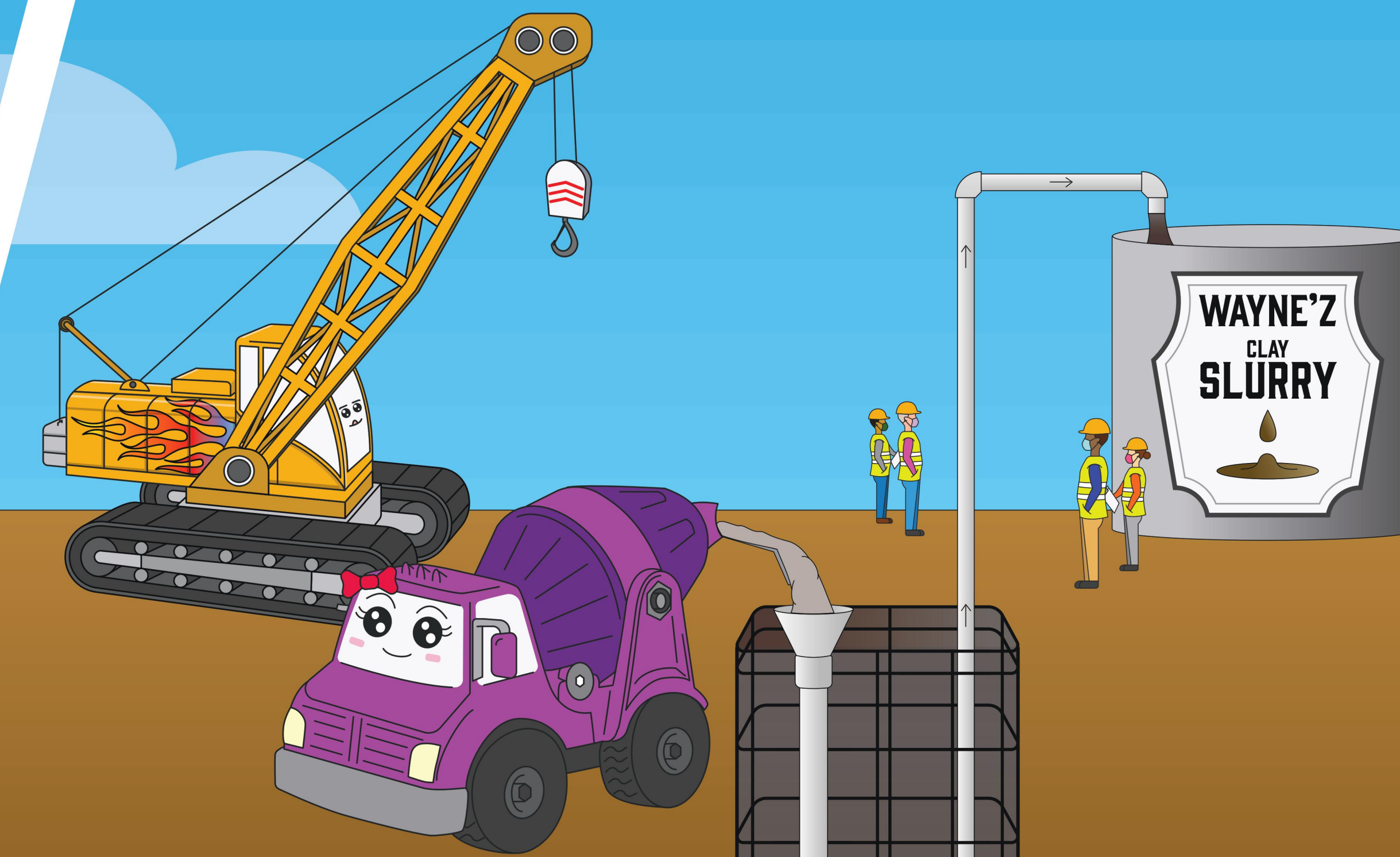
# Reinforce!

A **reinforcing panel** is added to strengthen the concrete.



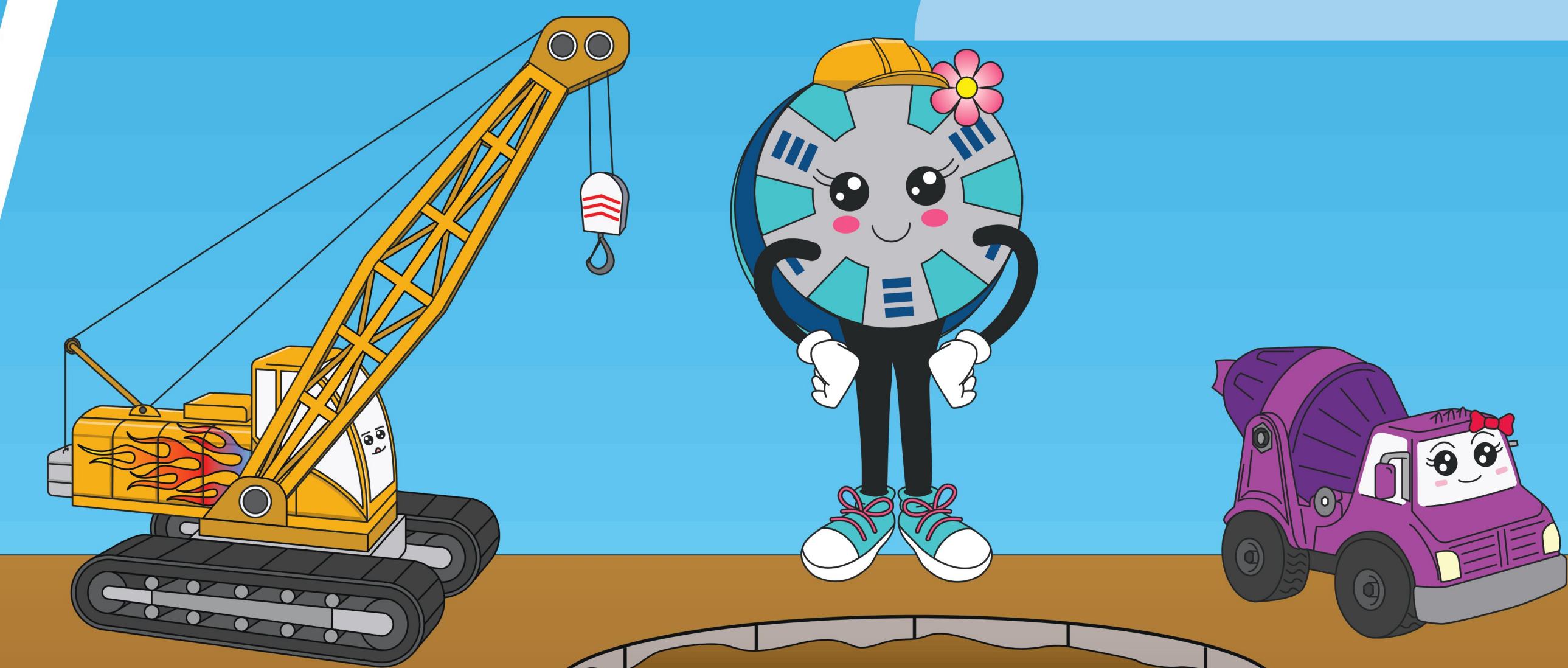
# Pour!

Finally, Wayne's friend Cece the Cement Mixer pours **concrete** into the pit, which displaces the slurry. This is called "tremie."



# Repeat!

Wayne and Cece repeat the process over a dozen times until the ring of the shaft is complete. Now the shaft can be excavated!



**Wayne the Crawler Crane's**  
Support of Excavation  
Process for Shaft Construction