

**Metadata Records**  
**Irrigation Innovation Consortium-Supported Project Datasets**

Please use a separate sheet for each dataset. Answers are automatically saved.  
 Questions? Contact Diane DeJong: [diane.de\\_jong@colostate.edu](mailto:diane.de_jong@colostate.edu).

Thank you!

Question	Your answer
<b>Project name</b>	Closing the loop on sustainable plasticulture
<b>Project background</b>	The Irrigation Industry manufactures approximately 250 million lbs. of plastic drip tubes, tapes, and emitter lines in the USA alone. Some of these products will be utilized in fields or landscapes for a long time (10-30 years), while other products, such as thin-mil drip tapes, are only used for one crop growing cycle (4 months). It is estimated that a small percent of these products are recycled. Much of the un-recycled and even "recycled" plastic drip products may end up in landfills or other non-renewable waste streams. We propose to investigate the technical and economic feasibility of using recycled thin-walled single-use drip tape as source material for thick-walled long-life drip tubing.
<b>Dataset name</b>	Economic Feasibility Data
<b>Primary author</b> Include first & last name, institution affiliation, and email address.	Charles Hillyer, Center for Irrigation Technology, California State University - Fresno, <a href="mailto:hillyer@mail.fresnostate.edu">hillyer@mail.fresnostate.edu</a>
<b>Primary contact</b> The primary contact may be the same or different from the primary author. Include first & last name, institution affiliation, and email address.	Charles Hillyer, Center for Irrigation Technology, California State University - Fresno, <a href="mailto:hillyer@mail.fresnostate.edu">hillyer@mail.fresnostate.edu</a>
<b>Dataset description</b> Please provide a brief, clear summary description of the dataset contents. Indicate as applicable: purpose and scope; time period; areas of investigation; and any other special characteristics.	The project team will conduct an economic feasibility study of utilizing recycled plastics from drip irrigation. This study will consider: 1) <u>Freight &amp; Logistics</u> . A viable stream of recycled material will require the collection and transport of drip tape post use. Understanding the process and cost of maintaining this material stream will be essential to understanding feasibility. . Power requirements, capital expenses, water treatment, and transportation will all affect the feasibility of a recycling enterprise 2) <u>Operational scale</u> . The scalability of the operation and how costs scale accordingly will profoundly affect feasibility. This facet of the study will help industry actors understand if recycling is viable in-house or a centralized or decentralized service. 3) <u>Freight &amp; Logistics</u> . A viable stream of recycled material will require the collection and transport of drip tape post use. Understanding the process and cost of maintaining this material stream will be essential to understanding feasibility.
<b>Spatial coverage</b> Please be specific as possible about the geographic coverage of your data, and record the information according to defined standards, such as FGDC or the Getty Thesaurus of Geographic Names. You can enter lat/long data, county names, state names, etc.	Center for Irrigation Technology 36°48'54.7"N 119°44'02.9"W

<p><b>Temporal coverage</b> Describe the temporal coverage of your dataset: Start: Time of day, Date, Month, Year Finish: Time of day, Date, Month Year</p>	2021 - 2023
<p><b>Re-use limitations</b> Describe known problems or caveats that would limit reuse of the data (e.g., uncertainty, sampling problems, blanks, quality control samples) and/or that future potential users of your dataset should know about. Or indicate "None."</p>	None
<p><b>Citations</b> Please include full citations and DOIs for articles published based on or related to this dataset. Or indicate "None."</p>	None
<p><b>Keywords</b> Please add a few appropriate National Agricultural Library keywords: <a href="https://agclass.nal.usda.gov/vocabularies/nalt">https://agclass.nal.usda.gov/vocabularies/nalt</a></p>	recycled plastic; drip irrigation; economic feasibility; plasticulture
<p><b>Tags</b> Please add a few of your own user-defined tags that would be useful to others who might use your dataset in the future.</p>	drip tube; drip tape; recycled resin;
<p><b>Acronyms &amp; abbreviations</b> Please define any acronyms, site abbreviations, or other project specific designations used in your dataset. Or indicate "none."</p>	CIT: Center for Irrigation Technology
<p><b>Other dataset storage location</b> Has this dataset already been uploaded elsewhere? Yes or No  Reasons may include a requirement as part of publishing a paper or storing data on GitHub or other locations to make accessible to others.  If yes, please provide the link or other information to explain where the dataset is located and where or how it can be accessed.</p>	No